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REPORT ON

PLATT AND WIND CAVE NATIONAL PARKS,
SULLYS HILL PARK, CASA GRANDE RUIN,
MUIR WOODS, PETRIFIED FOREST, AND
OTHER NATIONAL MONUMENTS, INCLUD-
ING LIST OF BIRD RESERVES

1911

COMPILED IN THE OFFICE OF

THE SECRETARY OF THE INTERIOR



2 copies

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REPORT ON PLATT AND WIND CAVE NATIONAL PARKS, SULLYS HILL PARK, CASA GRANDE RUIN, MUIR WOODS, PETRIFIED FOREST, AND OTHER NATIONAL MONUMENTS, TOGETHER WITH LIST OF BIRD RESERVES.

PLATT NATIONAL PARK.

By the acts of Congress of July 1, 1902 (32 Stat., 641), and April 21, 1904 (33 Stat., 220), 629.33 and 218.89 acres, respectively, at the town of Sulphur, Okla. (then Ind. T.), were segregated as the "Sulphur Springs Reservation," which designation, by joint resolution approved June 29, 1906, was changed to "Platt National Park."

The park, with a total area of 848.22 acres, extends in irregular form a distance of approximately 3 miles from northeast to southwest along Travertine Creek, including a portion of Rock Creek, which empties into the former, and it has a circuit of 9 miles.

Within the park are 33 known mineral and 2 nonmineral springs. The principal groups are the Bromide and Bromide-Sulphur Springs in the southwestern part of the park. Beach and Pavilion Springs in the northwestern corner, and the Wilson group in the southern part. Sulphur springs predominate, but there are also bromide, soda, and iron varieties. The Antelope and Buffalo Springs, nonmineral in character, are situated at the extreme northeastern end of the park with an elevation of 1,083 feet above sea level and an approximate discharge of 5,000,000 gallons daily into Travertine Creek. A spring has recently been discovered known as Medicine Spring. The work of completing the development and installing water from this spring in the pavilion at Bromide Springs has been completed and the park has been generally improved.

Permits for the transportation of passengers in and through the park were issued for seven automobiles—five for two-seated hacks and two for three-seated hacks—also several permits for other privileges. A license fee was exacted in each instance and the total revenues derived from permits was \$475.75.

There were 768 campers in the camping grounds who remained more than three days, and the park records show that 124,078 persons visited Bromide Springs during that period. Many of these visitors are residents of the city of Sulphur and they were counted each time they visited the springs. From the best obtainable information the actual number of visitors to the park, inclusive of the residents of Sulphur, was about 30,000.

There were driven through the park 4,594 head of cattle. Most of them were driven through in changing from one pasture to another or in order to get them to water or to where water was accessible. Quite a number of cattle, however, were driven through the park for shipment to market or for sale to local butchers.

The appropriation for the care and maintenance of the park for the last year, including all personal service, was but \$5,000, which

was barely sufficient to pay the salaries of the superintendent and other park employees. The appropriation for the next fiscal year for the maintenance of the park, including bridges, roads, trails, and sewerage, is \$10,000. Six thousand dollars of this will be required to pay the salaries of employees and \$4,000 is not a sufficient amount to construct the sewer. However, an estimate has been made to Congress for an appropriation of \$53,445 for this park for the fiscal year ending June 30, 1913, which, if appropriated, will enable the department to construct a proper sewer through the park.

REGULATIONS OF JUNE 10, 1908.

Pursuant to the authority conferred by the acts of Congress approved July 1, 1902 (32 Stat., 656), April 21, 1904 (33 Stat., 220), and the Oklahoma statehood act of June 16, 1906 (34 Stat., 272), the following rules and regulations for the government of the Platt National Park (formerly Sulphur Springs Reservation), in Oklahoma, are hereby established and made public:

1. It is forbidden to injure in any manner any of the springs, mineral deposits, or natural features within the park.
2. It is forbidden to cut or injure any timber or plants growing on the park lands, or to deface or injure any Government property.
3. No camping shall be permitted within 1,000 feet of any spring, nor upon any land except such as may be specifically designated for that purpose by the superintendent. Fires shall not be lighted except by the express permission of the superintendent; when so allowed, campers shall use only dead or fallen timber for fuel, and the utmost care must be exercised at all times to avoid setting fire to the timber and grass.
4. It is forbidden for any person to deposit garbage or refuse upon the park lands, except at places designated for that purpose by the superintendent, or to contaminate any of the springs or streams therein, or to divert or conduct the waters of such springs or streams from the natural or regular course.
5. No person shall remove from any of the bromide, iron, or soda springs more than 1 gallon of water in any one day, nor remove from any of the other springs more than 5 gallons in any one day, nor shall any water be taken therefrom for commercial purposes, except in pursuance of a license issued by the Secretary of the Interior. Whenever in his judgment the circumstances warrant, the superintendent may prohibit the use of the waters of any of the springs in the park other than for immediate drinking purposes at such springs, the facts in such case to be reported to the Secretary of the Interior.
6. Hunting or killing, wounding or capturing any bird or wild animal on the park lands, except dangerous animals when necessary to prevent them from destroying life or inflicting an injury, is prohibited. The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing such birds or wild animals, or in possession of game killed on the park lands under other circumstances than prescribed above, will be taken up by the superintendent and held subject to the order of the Secretary of the Interior, except in cases where it is shown by satisfactory evidence that the outfit is not

SEC 35

SEC 36

R 3 E
R 3 E



BM Antelope Spring

Buffalo Spring

BOULEVARD

Pebble Falls

Travertine

Falls

Mount Airy

34°30'

SEC 2

BOUL

PROPOSED



Roads and
buildings



Streams

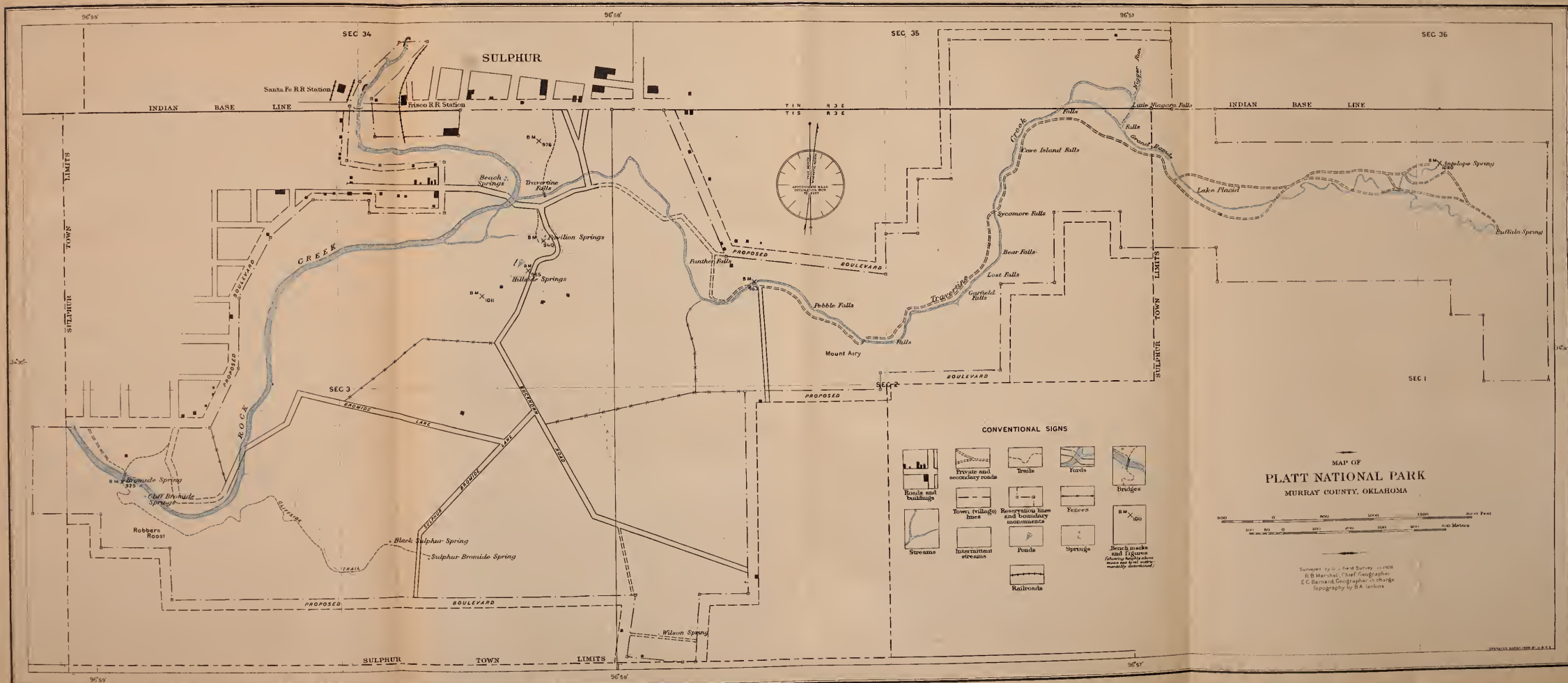


Private
section

Town

Inter

500 2000 Feet
500 Meters



MAP OF
PLATT NATIONAL PARK
MURRAY COUNTY, OKLAHOMA



Surveyed by U.S. Land Survey, 1908
H.B. Marshall, Chief Geographer
E.C. Bernard, Geographer in Charge
Topography by G.A. Johnson

the property of the person or persons violating this regulation and the actual owner thereof was not a party to such violation. Firearms will only be permitted in the park on written permission from the superintendent thereof.

7. Fishing with nets, seines, traps, or by the use of drugs or explosives, or in any other way than with hook and line, is prohibited. Fishing for purposes of merchandise or profit is forbidden. Fishing may be prohibited by order of the superintendent in any of the waters of the park, or limited therein to any specified season of the year, until otherwise ordered by the Secretary of the Interior.

8. No person will be permitted to reside permanently, engage in any business, or erect buildings or other improvements in the park, without permission, in writing, from the Secretary of the Interior.

9. The herding, grazing, or otherwise trespassing of cattle or loose stock of any kind within the park is strictly forbidden. Stock or cattle may be driven across the park, but must be confined to the roads and kept in motion under competent care while in the reservation.

10. No vehicles will be permitted to travel through the park except upon the roads designated for such traffic by the superintendent, and driving or riding over roads or bridges at a high rate of speed is prohibited.

11. Private notices or advertisements shall not be posted or displayed within the park, except such as may be necessary for the convenience and guidance of the public.

12. The sale of intoxicating liquors in the park is strictly forbidden.

13. No gambling or game of chance shall be permitted within the limits of the park; nor shall any person use profane or obscene language, commit or maintain a nuisance, or be guilty of disorderly conduct or any act involving immorality therein.

14. Persons who render themselves obnoxious by disorderly conduct or bad behavior, or who violate any of the foregoing rules, will be summarily removed from the park and will not be allowed to return without permission, in writing, from the Secretary of the Interior or the superintendent of the park.

No lessee or licensee shall retain in his employ any person whose presence in the park shall be deemed and declared by the superintendent to be subversive of the good order and management of the reservation.

15. Any person who violates any of the foregoing regulations will be deemed guilty of a misdemeanor, and be subjected to a fine, as provided by the act of April 21, 1904, of not less than \$5 nor more than \$100 and may be imprisoned for a term of not more than six months for each offense.

WIND CAVE NATIONAL PARK.

The act of Congress approved January 9, 1903 (32 Stat., 765), reserved a tract of land containing 10,522 acres in the State of South Dakota, 12 miles east of the town of Hot Springs and about the same distance southeast of Custer, as a public park, to be known as the Wind Cave National Park.

With the consent of the Attorney General, Mr. Seth Bullock, marshal for the district of South Dakota, has been continued in general charge of the reservation in an advisory capacity, and the superin-

tendent confers with him in regard to the administration thereof. The course pursued has aided in the effective management of the park during the park season. The present superintendent, A. C. Boland, was appointed May 1, 1911, succeeding R. J. Pilcher, who resigned on that date.

At the time of the creation of the park there were 10 entries covering lands within the park, aggregating 1,519.15 acres. Since that date the Government has secured title to all of the lands within the park except the NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ and NW. $\frac{1}{4}$ NE. $\frac{1}{4}$, sec. 35, T. 5 S., R. 5 E., Black Hills meridian. Jonathan C. West patented December 31, 1904, 80 acres, which is now owned by W. A. Rankin, formerly a superintendent of the park. For administrative reasons it is desirable that this private holding be eliminated from the park and it is recommended that adequate appropriation be made by Congress for the purpose.

On May 8, 1911, a revocable permit was granted Mrs. P. T. Paulsen to furnish meals to tourists at 50 cents each. No complaints have been made of the service rendered under this permit.

The number of tourists through the park during the year was 3,887, the majority of whom entered the reservation in automobiles.

During the season 12 permits were granted for the transportation of passengers in and through the park at the rate of \$50 per vehicle. Eleven of the permits were for the transportation of passengers by automobiles and one for the use of wagons.

No applications were received for the driving of cattle or other stock through the park, and no change was made during the year in the regulations promulgated June 10, 1908, for the government of the park.

A barn was constructed for the use of the superintendent, and considerable improvement work was done around the residence of the superintendent.

The roads and bridges require more or less attention continuously, but are reported to be in good condition.

In the cave considerable repair work was done to bridges, stairs, and paths and several new stairways constructed. Considerable exploration work was completed in the cave with a view toward ascertaining the practicability of opening more of it to the public. As nothing extraordinary in character was discovered, the opening of further sections will be deferred until, considering other park needs, more money is available for the purpose. The question of providing electric lights in the cave is under consideration.

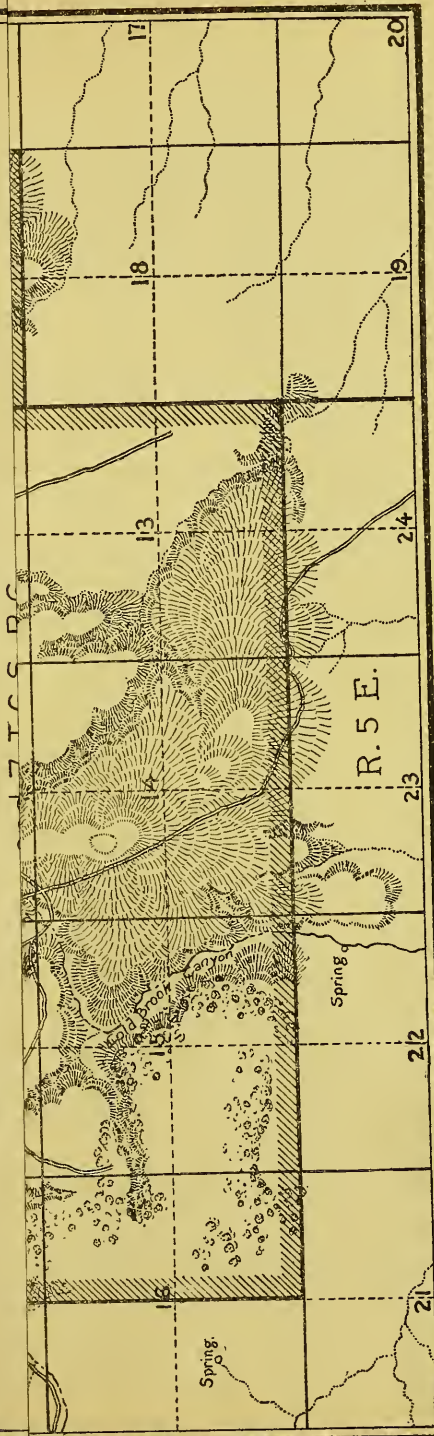
GENERAL REGULATIONS OF JUNE 10, 1908.

Pursuant to authority conferred by the act of Congress approved January 9, 1903, the following rules and regulations for the government of the Wind Cave National Park, in South Dakota, are hereby established and made public:

1. It is forbidden to remove or injure the specimens or formations in and around the Wind Cave, or to deface the same by written inscription or otherwise, or to injure or disturb in any manner or carry off any of the mineral deposits, specimens, natural curiosities, or wonders on the Government lands within the park.

WIND CAVE NATIONAL PARK

Embracing Sections 34, 35 and 36, T. 5 S., R. 5;
Sections 1, 2, 3, E $\frac{1}{2}$ of 4, E $\frac{1}{2}$ of 9, and Sec's 10, 11, 12, 13, 14, 15, E $\frac{1}{2}$
of 16, T. 6 S., R. 5; Section 31, T. 5 S., R. 6; Sections 6



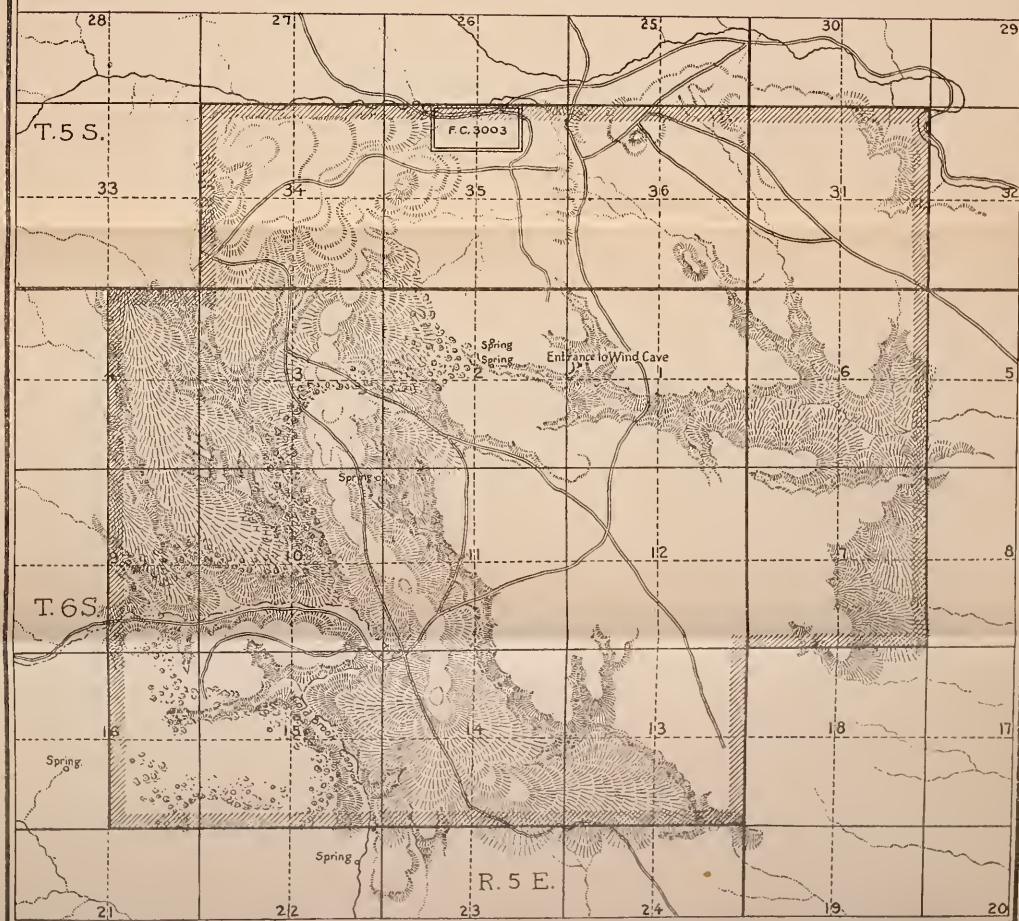
WIND CAVE NATIONAL PARK

Embracing Sections 34, 35 and 36, T. 5 S., R. 5;
Sections 1, 2, 3, E $\frac{1}{2}$ of 4, E $\frac{1}{2}$ of 9, and Sec's 10, 11, 12, 13, 14, 15, E $\frac{1}{2}$
of 16, T. 6 S., R. 5; Section 31, T. 5 S., R. 6; Sections 6
and 7 T. 6 S., R. 6,

All East of BLACK HILLS MERIDIAN

SOUTH DAKOTA

Containing 10,522.17 acres.



2. No person shall be permitted to enter the cave unless accompanied by the superintendent or other park employee or by competent guides.

3. It is forbidden to cut or injure any timber growing on the park lands, or to deface or injure any Government property. Camping parties will be allowed to use dead or fallen timber for fuel.

4. Fires should be lighted only when necessary and completely extinguished when not longer required. The utmost care must be exercised at all times to avoid setting fire to the timber and grass.

5. Hunting or killing, wounding or capturing any bird or wild animal on the park lands, except dangerous animals when necessary to prevent them from destroying life or inflicting an injury, is prohibited. The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing such birds or wild animals, or in possession of game killed on the park lands under other circumstances than prescribed above, will be taken up by the superintendent and held subject to the order of the Secretary of the Interior, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation and the actual owner thereof was not a party to such violation. Firearms will only be permitted in the park on written permission from the superintendent thereof.

6. Fishing in any other way than with hook and line is forbidden. Fishing may be prohibited by order of the superintendent in any of the waters of the park, or limited therein to any specified season of the year, until otherwise ordered by the Secretary of the Interior.

7. No person will be permitted to reside permanently, engage in any business, or erect buildings, etc., upon the Government lands in the park without permission in writing from Secretary of the Interior. The superintendent may grant authority to competent persons to act as guides and revoke the same in his discretion. No pack trains will be allowed in the park unless in charge of a duly registered guide.

8. Owners of patented lands within the park limits are entitled to the full use and enjoyment thereof: such lands, however, shall have the metes and bounds thereof so marked and defined that they may be readily distinguished from the park lands. Stock may be taken over the park lands to patented lands with the written permission and under the supervision of the superintendent.

9. The herding or grazing of loose stock or cattle of any kind on the Government lands in the park, as well as the driving of such stock or cattle over the same, is strictly forbidden, except in such cases where authority therefor is granted by the superintendent.

10. No drinking saloon or barroom will be permitted upon Government lands in the park.

11. Private notices or advertisements shall not be posted or displayed on the Government lands within the reservation, except such as may be necessary for the convenience and guidance of the public.

12. Persons who render themselves obnoxious by disorderly conduct or bad behavior, or who violate any of the foregoing rules, will be summarily removed from the park and will not be allowed to return without permission in writing from the Secretary of the Interior or the superintendent of the park.

No lessee or licensee shall retain in his employ any person whose presence in the park shall be deemed and declared by the superintendent to be subversive of the good order and management of the reservation.

13. Any person who violates any of the foregoing regulations will be deemed guilty of a misdemeanor, and, upon conviction, be fined not more than \$1,000, or be imprisoned not more than 12 months, or both, in the discretion of the court, as provided by the act creating the park.

14. The superintendent designated by the Secretary is hereby authorized and directed to remove all trespassers from the Government lands in the park and enforce these rules and regulations and all the provisions of the act of Congress aforesaid.

REGULATIONS OF JUNE 10, 1908, GOVERNING THE IMPOUNDING AND DISPOSITION OF LOOSE LIVE STOCK.

Horses, cattle, or other domestic live stock running at large or being herded or grazed on Government lands in the Wind Cave National Park without authority therefor, will be taken up and impounded by the superintendent, who will at once give notice thereof to the owner, if known. If the owner is not known, notice of such impounding, giving a description of the animal or animals, with the brands thereon, will be posted in six public places inside the park and in two public places outside the park. Any owner of an animal thus impounded may, at any time before the sale thereof, reclaim the same upon proving ownership and paying the cost of notice and all expenses incident to the taking up and detention of such animal, including the cost of feeding and caring for the same. If any animal thus impounded shall not be reclaimed within 30 days from notice to the owner or from the date of posting notices, it shall be sold at public auction at such time and place as may be fixed by the superintendent after 10 days' notice, to be given by posting notices in six public places in the park and two public places outside the park, and by mailing to the owner, if known, a copy thereof.

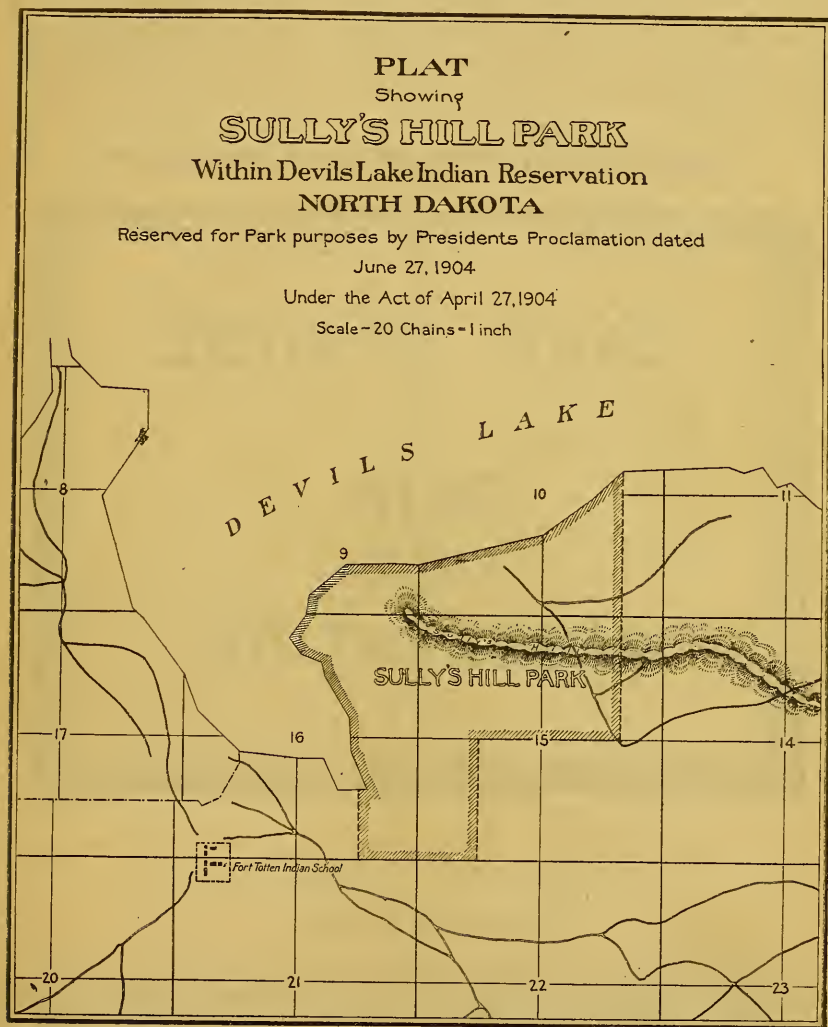
All money received from the sale of such animals and remaining after the payment of all expenses incident to the taking up, impounding, and selling thereof, shall be carefully retained by the superintendent in a separate fund for a period of six months, during which time the net proceeds from the sale of any animal may be claimed by and paid to the owner upon the presentation of satisfactory proof of ownership, and if not so claimed within six months from the date of sale such proceeds shall be turned into the Wind Cave National Park fund.

The superintendent shall keep a record in which shall be set down a description of all animals impounded, giving the brands found on them, the date and locality of the taking up, the date of all notices and manner in which they were given, the date of sale, the name and address of the purchaser, the amount for which each animal was sold, and the cost incurred in connection therewith, and the disposition of the proceeds.

The superintendent will, in each instance, make every reasonable effort to ascertain the owner of animals impounded and to give actual notice thereof to such owner.

SULLY'S HILL PARK.

This reservation, set aside by Executive proclamation dated June 2, 1904, under the act approved April 27, 1904 (33 Stat., 319), contains about 780 acres. It is located on the south shore of Devils Lake, N. Dak., having about 2 miles of shore line, with its western boundary 1 mile east of the Fort Totten Indian School. Inasmuch



Township No. 152 North, Range No. 65 West.

FIG. 1.—Map of Sully's Hill Park.

as no appropriation has been made for the care and protection of this reservation, Mr. Charles M. Ziebach, in charge of the Indian industrial school (Fort Totten), has been continued as acting superintendent, and required to exercise the necessary supervision and control over the same until appropriation is made therefor by Congress.

The tract is well wooded and has an ample supply of water and many rugged hills, among which, on the western boundary, lies what is known as Sullys Hill. In the southwestern part is a small body of water known as Sweet Water Lake, west of which the surface is generally level and the soil good.

No buildings or improvements of any kind have been made in the reservation, and Congress has made no appropriation for the care thereof. If this park is to be continued under the supervision of the Secretary of the Interior, it is desirable that funds be provided for the protection and improvement thereof, and an estimate in the sum of \$2,500 has accordingly been submitted to Congress for such purpose.

Reservation boundary

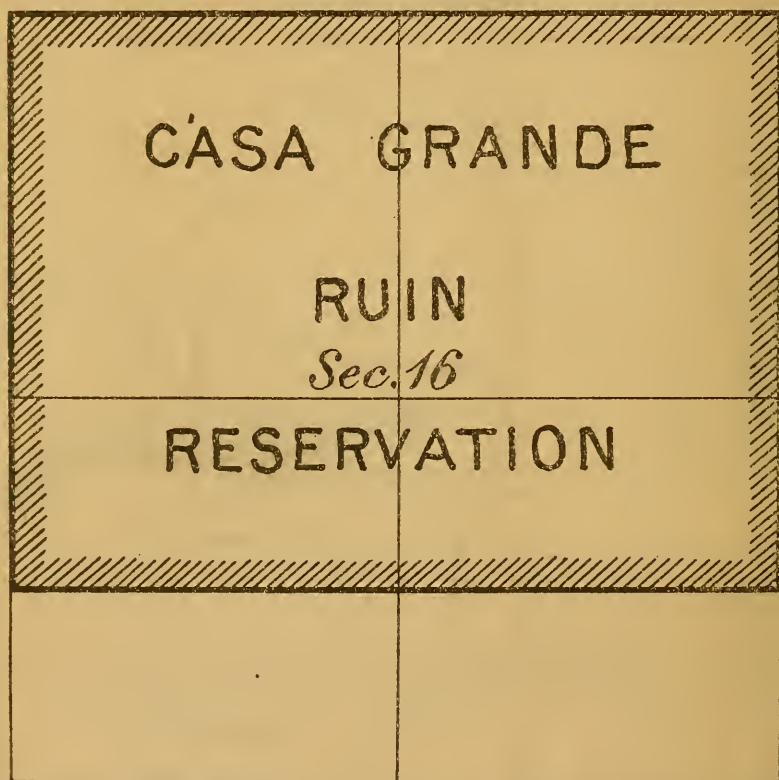


FIG. 2.—Casa Grande Ruin Reservation, Ariz., embracing the NW. $\frac{1}{4}$, the NE. $\frac{1}{4}$, the N. $\frac{1}{2}$ of the SW. $\frac{1}{4}$, and the N. $\frac{1}{2}$ of the SE. $\frac{1}{4}$ of sec. 16, T. 5 S., R. 8 E., Gila and Salt River meridian; created March 2, 1889.

CASA GRANDE RUIN.

This reservation is located near Florence, Ariz., about 18 miles northeast of Casa Grande station, on the Southern Pacific Railroad, and contains about 480 acres. It was set aside by Executive order dated June 22, 1902, under the act approved March 2, 1889 (25 Stat.,

961). By presidential proclamation of December 10, 1909, the boundaries of the reservation were changed by the elimination of 120 acres on which there were no prehistoric ruins and the inclusion of a tract of 120 acres adjoining the reservation on the east, on which are located important mounds of historic and scientific interest.

Casa Grande is an Indian ruin of undetermined antiquity, which was discovered in 1694 by Padre Kino, a Jesuit missionary. This great house is said to be the most important ruin of its type in the Southwest, and as such it has strong claims for archaeological study, repair, and permanent preservation. It is built of puddled clay molded into walls and dried in the sun, and is of perishable character. The main building was originally five or six stories high and covered a space 59 feet by 43 feet 3 inches. The walls have been gradually disintegrating, owing to the action of the elements. A corrugated iron roof has heretofore been erected over this building to protect it, so far as practicable, from further decay.

Surrounding Casa Grande proper is a rectangular walled inclosure or "compound," having an area of about 2 acres. In this inclosure, which has been called Compound A, excavations conducted under the Bureau of American Ethnology have resulted in the uncovering of a number of buildings or clusters of rooms, and others are known to exist but have not been excavated. Two other compounds were discovered and designated, respectively, Compound B and Compound C, but the latter has not been excavated and is still in the form of a mound. These three compounds together constitute what is known as the Casa Grande group of ruins. As a result of this work, conducted under the Bureau of American Ethnology, the points of interest to visitors have been materially augmented. The ground plan of the ruin was increased by some 58 rooms, a number of plazas and surrounding walls, making the total number of rooms now open on the ground floor 100.

Mr. Frank Pinkley, the custodian, who resides on the reservation, reports that the number of visitors during the year were fully up to the average and the usual interest seems to be shown by persons from the various parts of the United States in the ruin. He calls attention to the need of literature in relation to the ruin for distribution among visitors as a means of greatly increasing the interest of the public in the reservation.

NATIONAL MONUMENTS AND PRESERVATION OF AMERICAN ANTIQUITIES.

GENERAL STATEMENT.

By an act approved June 8, 1906, entitled "An act for the preservation of American antiquities," the President of the United States is authorized, "in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments." Under such authority the President has created the following monuments:

National monuments administered by Interior Department.

Name.	State.	Date.	Area.
			<i>Acres.</i>
Devils Tower.....	Wyoming.....	Sept. 24, 1906	1,152
Montezuma Castle.....	Arizona.....	Dec. 8, 1906	160
El Morro.....	New Mexico.....	do.....	160
Chaco Canyon.....	do.....	Mar. 11, 1907	20,629
Muir Woods ¹	California.....	Jan. 9, 1908	295
Pinnacles.....	do.....	Jan. 16, 1908	2,080
Tumacacori.....	Arizona.....	Sept. 15, 1908	10
Navajo ²	do.....	Mar. 20, 1909	4,600
Mukuntuweap.....	Utah.....	July 31, 1909	2,15,840
Shoshone Cavern.....	Wyoming.....	Sept. 21, 1909	210
Natural Bridges ³	Utah.....	Sept. 25, 1909	2,2,740
Gran Quivira.....	New Mexico.....	Nov. 1, 1909	2,160
Sitka.....	Alaska.....	Mar. 23, 1910	2,57
Rainbow Bridge ⁴	Utah.....	May 30, 1910	160
Lewis and Clark Cavern.....	Montana.....	May 16, 1911	100
Colorado.....	Colorado.....	May 24, 1911	13,883
Petrified Forest.....	Arizona.....	July 31, 1911	25,625

¹ Donated to the United States.² Estimated area.³ Within an Indian reservation.⁴ Based on 15 known ruins, with a reserved area of 40 acres surrounding each ruin. Exterior limits of tract specified in proclamation contain 918,310 acres.⁵ Originally set aside by proclamation of April 16, 1908, and contained only 120 acres.

The following regulations for the protection of national monuments were promulgated on November 19, 1910:

1. Fires are absolutely prohibited.
2. No firearms are allowed.
3. No fishing permitted.
4. Flowers, ferns, or shrubs must not be picked, nor may any damage be done to the trees.
5. Vehicles and horses may be left only at the places designated for this purpose.
6. Lunches may be eaten only at the spots marked out for such use, and all refuse and litter must be placed in the receptacles provided.
7. Pollution of the water in any manner is prohibited; it must be kept clean enough for drinking purposes.
8. No drinking saloon or barroom will be permitted.
9. Persons rendering themselves obnoxious by disorderly conduct or bad behavior, or who may violate any of the foregoing rules, will be summarily removed.

Names and addresses of officers having supervision of national monuments.

F. C. Dezendorf, new custom-house building, San Francisco, Cal.:

Muir Woods National Monument, Cal.

Pinnacles National Monument, Cal.

Gratz W. Helm, Federal building, Los Angeles, Cal.:

Montezuma Castle National Monument, Ariz.

Petrified Forest National Monument, Ariz.

Tumacacori National Monument, Ariz.

Navajo National Monument, Ariz.

George E. Hair, Federal building, Salt Lake City, Utah:

Mukuntuweap National Monument, Utah.

Natural Bridges National Monument, Utah.

Rainbow Bridge National Monument, Utah.

Leroy O. Moore, Santa Fe, N. Mex.:

El Morro National Monument, N. Mex.

Chaco Canyon National Monument, N. Mex.

Gran Quivira National Monument, N. Mex.

H. C. Cullom, Helena, Mont., Lewis and Clark Cavern National Monument, Mont.
Adelbert Baker, Cheyenne, Wyo.:

Devils Tower National Monument, Wyo.

Shoshone Cavern National Monument, Wyo.

A. Christensen, special agent in charge field service, Alaska (219 Federal building, Seattle, Wash.), Sitka National Monument, Alaska.

By proclamation of May 24, 1911, one new national monument under the department has been created during the year, designated as the Colorado National Monument, Colo. The lands embraced within this reservation are in part identical with those included within the boundaries of the Monument National Park proposed in H. R. 22549, introduced in the Sixty-first Congress, and which failed of passage. The monument, however, contains nearly 5,000 acres of land less than the area proposed to be segregated by the national-park bill.

In the case of the Lewis and Clark Cavern Monument, Mont., set aside by proclamation of May 11, 1908, a new proclamation was issued on May 16, 1911, more specifically defining the boundaries thereof.

The Pinnacles National Monument, Cal., was set aside by a proclamation dated January 16, 1908, at which time it was under the supervision of the Secretary of Agriculture, being within a national forest. By proclamation dated December 12, 1910, the lands on which this monument is located were eliminated from the national forest, and since that date it has been under supervision of the Secretary of the Interior.

The Petrified Forest National Monument, Ariz., was originally set aside on December 8, 1906, with an area of 60,776 acres. The definite location of the principal deposits of silicified wood was not known, the intention being to reduce the area after the lands could be examined and the location of the valuable deposits determined. During the year Dr. George P. Merrill, head curator of geology, National Museum, visited the reservation at the instance of this department and submitted a report thereon recommending the reduction of the metes and bounds of the reservation and suggesting the segregation of such portions thereof as are desirable for the use of collectors having permits under the act of June 8, 1908, to take specimens of silicified wood from the reservation. This report met with the approval of the department, and accordingly on July 31, 1911, a new proclamation was issued reducing the area of the Petrified Forest National Monument to 25,625 acres.

The supervision of these various monuments has, in the absence of any specific appropriation for their protection and improvement, necessarily been intrusted to the field officers of the department having charge of the territory in which the several monuments are located. This supervision in many instances is necessarily limited, and considerable difficulty has been experienced in protecting the monuments from vandalism, unauthorized exploration, and spoliation. The department has recommended that adequate appropriation be made by Congress for the protection and improvement of these reservations, only such monuments as in the judgment of the Secretary of the Interior are subject to depredations by vandals and unauthorized collections on the part of the public to be provided with a custodian or superintendent.

National monuments administered by the Department of Agriculture.

Name.	State.	Date.	Area.
			<i>Acres.</i>
Cinder Cone.....	California.....	May 6, 1907	¹ 5, 120
Lassen Peak.....	do.....	do.....	¹ 1, 280
Gila Cliff dwellings.....	New Mexico.....	Nov. 16, 1907	160
Tonto.....	Arizona.....	Dec. 19, 1907	¹ 640
Grand Canyon.....	do.....	Jan. 11, 1908	¹ 806, 400
Jewel Cave.....	South Dakota.....	Feb. 7, 1908	¹ 1, 280
Wheeler.....	Colorado.....	Dec. 17, 1908	300
Mount Olympus.....	Washington.....	Mar. 2, 1909	¹ 608, 640
Oregon Caves.....	Oregon.....	July 12, 1909	480
Devil's Postpile.....	California.....	July 6, 1911	800

¹ Estimated area.*National monument administered by the War Department.*

Name.	State.	Date.	Area.
			<i>Acres.</i>
Big Hole Battlefield.....	Montana.....	June 23, 1910 ¹	5

¹ Set aside by Executive order.

The uniform rules and regulations promulgated by the Secretaries of the Interior, Agriculture, and War, under date of December 28, 1906, to carry into effect the general provisions of the act for the preservation of American antiquities provides (par. 3) that—

Permits for the excavation of ruins, the excavation of archeological sites, and the gathering of objects of antiquity will be granted, by the respective secretaries having jurisdiction, to reputable museums, universities, colleges, or other recognized scientific or educational institutions, or to their duly authorized agents.

During the year three permits were granted for the examination, excavation, and gathering of specimens in the San Joaquin Valley in the contiguous State and Territory of Utah and Arizona, the ruins of Puye on the Santa Clara Indian Reservation in New Mexico, and the prehistoric ruins on public lands in the northern part of Yavapai County, Ariz., adjacent to the Coconino National Forest. Permits were granted for the gathering of samples of silicified wood from the Petrified Forest National Monument to Dr. Victor Goldsmith, for the use of the museum of the University of Heidelberg, Germany, and to the American Museum of National History, New York City. One application was denied. A number of the largest archeological institutions in the country have claimed that the uniform regulations of December 28, 1906, should be amended so as to remove certain restrictions which they regard as oppressive. This matter is still under consideration in the department.

MUIR WOODS NATIONAL MONUMENT.

On December 31, 1907, the Secretary of the Interior, for and on behalf of the United States, accepted from William Kent and his wife, Elizabeth Thatcher Kent, of Chicago, Ill. in accordance with the act of Congress approved June 8, 1906, entitled "An act for the preservation of American antiquities," a deed conveying to the United States the following-described land, situate in Marin County, Cal.:

Beginning at a stake, A. 7, driven in the center of the road in Redwood Cañon and located by the following courses and distances from the point of commencement of the tract of land, which was conveyed by the Tamalpais Land and Water Company to William Kent by a deed dated August 29th, 1905, and recorded in the office of the county recorder of Marin County, California, Book 95 of Deeds at page 58, to wit: North eighteen degrees thirty-two minutes, east two hundred thirty-two and sixty-four hundredths feet, north sixty-six degrees thirty minutes, west one hundred sixty-seven and thirty-four hundredths feet, north eighty-six degrees twenty-five minutes, west ninety-eight and sixty-two hundredths feet, north seventy degrees no minutes, west two hundred forty-one and seven hundredths feet, north fifty-seven degrees twenty-nine minutes, west one hundred seventy-eight and three hundredths feet, north forty-six degrees twenty-two minutes, west two hundred thirty-five and thirty-nine hundredths feet, and north twenty-four degrees twenty-five minutes, west

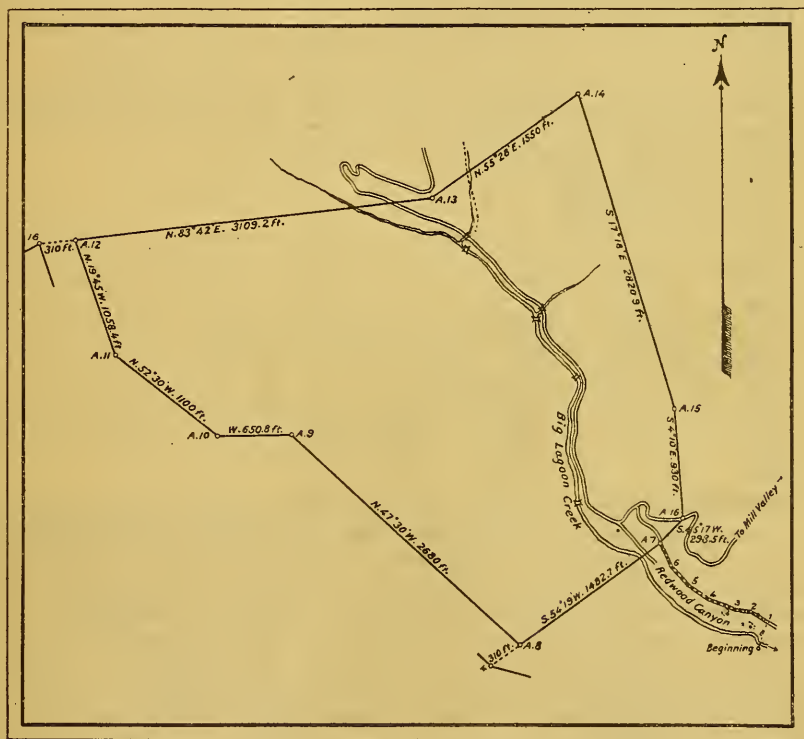


Fig. 3.—Muir Woods National Monument, Cal., in T. 1 N., R. 6 W., Mount Diablo meridian; created January 9, 1908.

two hundred twenty-five and fifty-six hundredths feet; thence from said stake, A. 7, the point of beginning, south fifty-four degrees nineteen minutes, west fourteen hundred eighty-two and seven-tenths feet to Station A. 8, from which Station 4 of the survey of the tract of land conveyed to William Kent as aforesaid bears south fifty-four degrees nineteen minutes, west three hundred ten feet distant; thence from said Station A. 8 north forty-seven degrees thirty minutes, west twenty-six hundred eighty feet; thence due west six hundred fifty and eight-tenths feet; thence north fifty-two degrees thirty minutes, west eleven hundred feet; thence north nineteen degrees forty-five minutes, west ten hundred fifty-eight and four-tenths feet to Station A. 12, from which Station 16 of the survey of the tract of land conveyed to William Kent as aforesaid bears south eighty-three degrees forty-two minutes, west three hundred ten feet distant; thence north eighty-three degrees forty-two minutes, east thirty-one hundred nine and two-tenths feet; thence north fifty-five degrees

twenty-eight minutes, east fifteen hundred fifty feet to an iron bolt, three-quarters of an inch in diameter and thirty inches long, Station 14; thence south seventeen degrees eighteen minutes, east twenty-eight hundred twenty and nine-tenths feet; thence south four degrees ten minutes, east nine hundred thirty feet to a stake, A. 16, driven in the center of a graded road; and thence south forty-five degrees seventeen minutes, west two hundred ninety-eight and five-tenths feet to said stake A. 7, the place of beginning. Containing an area of two hundred ninety-five acres, a little more or less.

On January 9, 1908, the President, by virtue of the power and authority vested in him by section 2 of said act, declared, proclaimed, and set apart the lands described as a "national monument to be known and recognized as Muir Woods National Monument." The Secretary of the Interior had, prior to the date last mentioned, withdrawn the lands from entry or sale.

On September 10, 1908, the department prescribed regulations as follows for the government and protection of said monument:

The following rules and regulations for the government of the Muir Woods National Monument, in the State of California, set aside under the provisions of the act of Congress approved June 8, 1906, are hereby established and made public, pursuant to the authority conferred by said act:

1. Fires are absolutely prohibited.
2. No firearms allowed.
3. No fishing permitted.
4. Flowers, ferns, or shrubs must not be picked, nor may any damage be done to the trees.
5. Vehicles and horses may be left only at the places designated for this purpose.
6. Lunches may be eaten only at the spots marked out for such use, and all refuse and litter must be placed in the receptacles provided.
7. Pollution of the water in any manner is prohibited. It must be kept clean enough for drinking purposes.
8. No drinking saloon or barroom will be permitted.
9. Persons rendering themselves obnoxious by disorderly conduct or bad behavior, or who may violate any of the foregoing rules, will be summarily removed.

While the sundry civil act approved May 27, 1908 (35 Stat., 317), was pending before Congress attention was called to the fact that no provision was made for the salaries of custodians or for other protection of national monuments, as recommended in the estimates for these services, and that the department would be embarrassed in its efforts to protect monuments from vandalism and unauthorized exploration and spoliation because of a lack of funds. The department had recommended an appropriation of \$5,000 for these purposes. Three thousand dollars had been appropriated the previous year, but because of deficient wording of the act, was not made available. However, on July 11, 1910, Andrew Lind, of California, was appointed custodian of the Muir Woods National Monument, at a salary of \$900 per annum, payable from the appropriation "Protection of public lands and timber."

These lands consist of one of the most noted redwood groves in the State of California, and were held in private ownership by Mr. Kent. The tract is of great scientific interest, contains many redwood trees which have grown to a height of 300 feet and have a diameter at the butt of 18 feet or more. It is located in a direct line about 7 miles from San Francisco, Cal., and is in close proximity to a large and growing suburban population.

The report of Mr. Andrew Lind, the custodian of the reservation, for the year shows that the monument was carefully patrolled and the regulations for the government thereof enforced. Obstructions to

the roads and trails in the shape of fallen trees have been removed and placed in condition for the accommodation of travel. About 50,000 people visited the monument during the year. Mr. Lind recommends that allotments be made for the renewing and cleaning out of the fire lines, that the main road running through the reservation be put in better condition, and that a suitable building be provided inside the monument for the use of the custodian.

PETRIFIED FOREST OF ARIZONA.

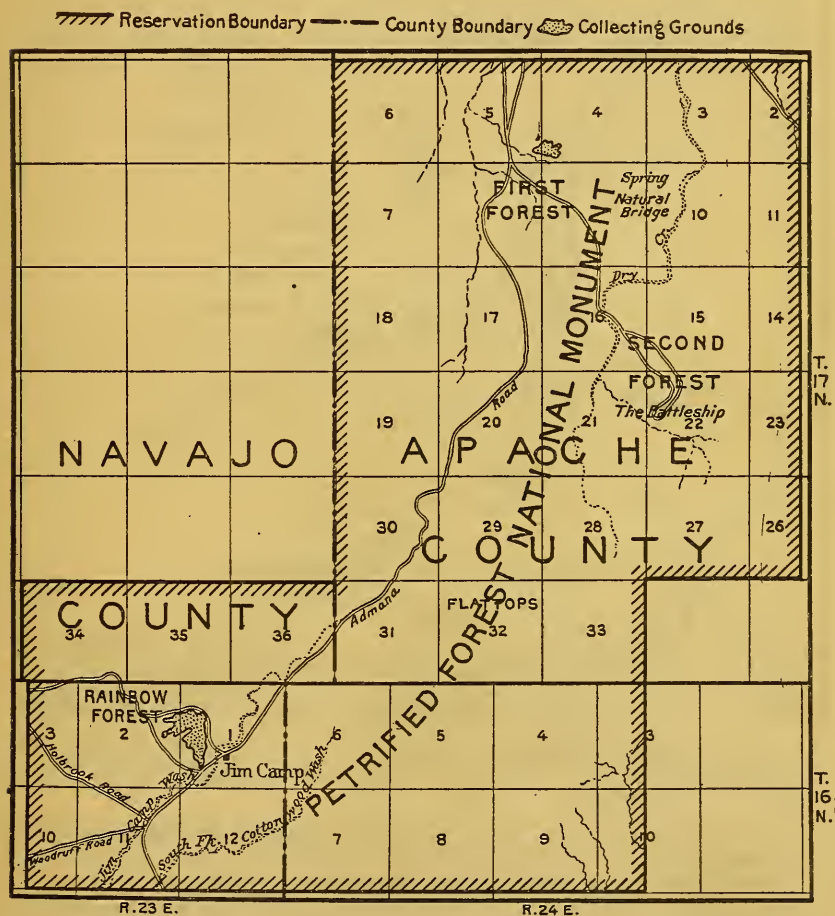


FIG. 4.—Petrified Forest National Monument, Ariz., embracing secs. 1, 2, 11, and 12 and E. $\frac{1}{2}$ secs. 3 and 10, T. 16 N., R. 23 E.; secs. 4 to 9 and W. $\frac{1}{2}$ secs. 3 and 10, T. 16 N., R. 24 E.; secs. 34, 35, 36, T. 17 N., R. 23 E.; sec. 3 to 10, 15 to 22, 27 to 33, and W. $\frac{1}{2}$ secs. 2, 11, 14, 23, 26, T. 17 N., R. 24 E., Gila and Salt River meridian, containing 40.04 acres, set aside by proclamation of the President July 31, 1911.

The Petrified Forest of Arizona lies in the area between the Little Colorado River and the Rio Puerco, 15 miles east of their junction and 6 miles south of Adamana, a station on the Santa Fe Pacific Railroad, from which place it is accessible by horse or vehicle. This area is of great interest because of the abundance of petrified coniferous trees, as well as its scenic features. The trees lie scattered about

in great profusion; none, however, stands erect in its original place of growth, as do many of the petrified trees in the Yellowstone National Park. The trees probably at one time grew beside an inland sea; after falling they became waterlogged, and during decomposition the cell structure of the wood was entirely replaced by silica derived from sandstone in the surrounding land. Over a greater part of the entire area trees lie scattered in all conceivable positions and in fragments of all sizes. Perhaps the most prominent of all the scenic

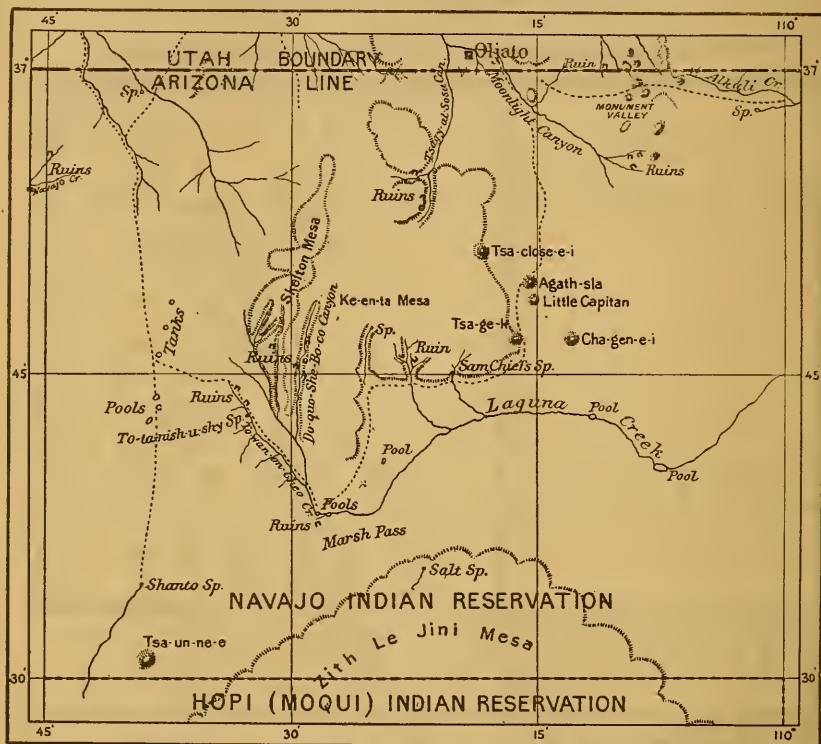


FIG. 5.—Navajo National Monument, Ariz., embracing all cliff-dwelling and pueblo ruins between the parallel of latitude $36^{\circ} 30'$ and 37° north and longitude 110° and $110^{\circ} 45'$ west from Greenwich, with 40 acres of land in square form around each of said ruins; created March 20, 1909.

features of the region is the well-known Natural Bridge, consisting of a great petrified trunk lying across a canyon 45 feet in width and forming a footbridge over which anyone may easily pass.

Prof. Lester F. Ward, of the Geological Survey, has stated that "there is no other petrified forest in which the wood assumes so many varied and interesting forms and colors, and it is these that present the chief attraction for the general public. The state of mineralization in which much of this wood exists almost places them among the gems or precious stones. Not only are chalcedony, opals, and agates found among them, but many approach the condition of jasper and onyx. The degree of hardness attained by them is such that they are said to make an excellent quality of emery."

Dr. Walter Hough, of the Smithsonian Institution, who visited this monument, states that "in the celebrated Petrified Forest, which is some 18 miles from Holbrook, Ariz., on the picturesque Santa Fe

Railroad, there are ruins of several ancient Indian villages. These villages are small, in some cases having merely a few houses, but what gives them a peculiar interest is that they were built of logs of beautiful fossil wood. * * * The prehistoric dwellers of the land selected cylinders of uniform size, which were seemingly determined by the carrying strength of a man. It is probable that prehistoric builders never chose more beautiful stones for the construc-

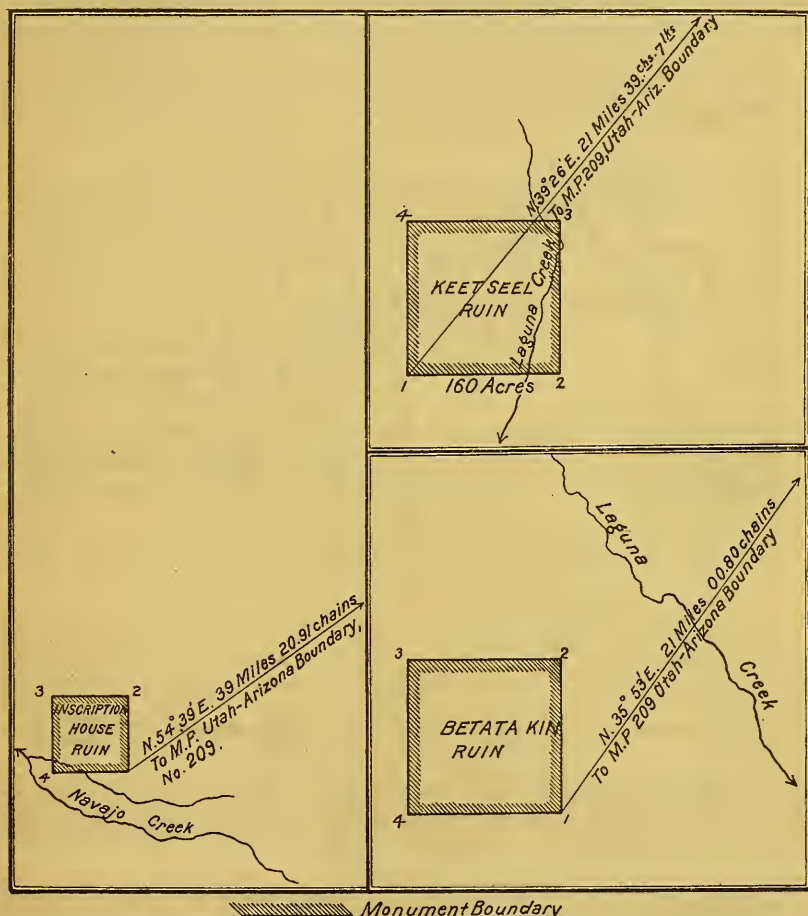


FIG. 6.—Navajo National Monument, Ariz., containing 360 acres, embracing the Keet Seel and Betata Kin ruins, located in two small tracts of 160 acres each, along Laguna Creek, and Inscription House ruins, on Navajo Creek, in a 40-acre tract, all within the Navajo Indian Reservation.

tion of their habitations than the trunks of the trees which flourished ages before man appeared on the earth.

"This wood agate also furnished material for stone hammers, arrowheads, and knives, which are often found in ruins hundreds of miles from the forest."

NAVAJO NATIONAL MONUMENT.

This monument as originally created embraces a large area within the Navajo Indian Reservation, which was reserved tentatively and

with a view to a reduction to such small tract or tracts as might be found to contain valuable prehistoric pueblo or cliff dwellings when the extent of same could be determined by examination on the ground and their locus definitely fixed by traverse lines connecting them with some corner of the public surveys. Both of these conditions have now been fulfilled. By proclamation of March 14, 1912, the original reserve was reduced to three small tracts, embracing 360 acres, within which are located, respectively, two most interesting and extensive pueblo cliff-dwelling ruins in a remarkable state of preservation and known as the Betata Kin and Keet Seel, and a third cliff-dwelling ruin called Inscription House, located on Navajo Creek just beyond the western boundary of the present monument and centrally located

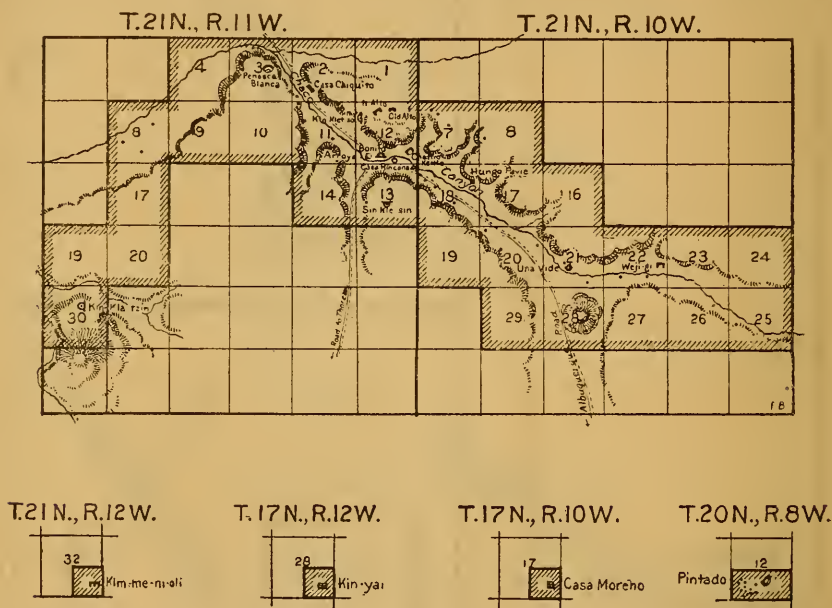


FIG. 7.—Chaco Canyon National Monument, N. Mex., embracing secs. 7 and 8 and 16 to 29, inclusive, T. 21 N., R. 10 W.; secs. 1, 2, 3, 4, and 8 to 14, inclusive, and 17, 19, 20, and 30, T. 21 N., R. 11 W.; S. $\frac{1}{2}$ sec. 12, T. 20 N., R. 8 W.; SE. $\frac{1}{4}$ sec. 32, T. 21 N., R. 12 W.; SE. $\frac{1}{4}$ sec. 28, T. 17 N., R. 12 W.; SE. $\frac{1}{4}$ sec. 17, T. 17 N., R. 10 W., New Mexico principal meridian; created March 11, 1907.

within and protected by a tract of land containing 40 acres. Inscription House is extraordinary not only because of its remarkable state of preservation, but because upon the walls of its well-preserved rooms were found inscriptions written in Spanish by early explorers and plainly dated 1661.

The new boundaries of the Navajo National Monument under the latter proclamation are shown in the preceding plat.

CHACO CANYON NATIONAL MONUMENT.

These remarkable relics of an unknown people embrace numerous communal or pueblo dwellings built of stone, among which is the ruin known as Pueblo Bonito, containing, as it originally stood,

1,200 rooms and being the largest prehistoric ruin yet discovered in the Southwest. Numerous other ruins, containing from fifty to a hundred or more rooms, are scattered along Chaco Canyon and tributaries for a distance of about 14 miles and upon adjacent territory to the east, south, and west of Chaco Canyon many miles farther. The most important of these ruins are as follows: Pueblo Bonito, Chetro Kettle, Arroyo, New Alto, Old Alto, Kin-Klet Soi, Casa Chiquita, Penasco Blanco, Kin-Kla-tzin, Hungo Pavis, Unda Vidie, Weji-gi, Kim-me-ni-oli, Kin-yai, Casa Morena, and Pintado.

RAINBOW BRIDGE NATIONAL MONUMENT.

This natural bridge is located within the Navajo Indian Reservation, near the southern boundary of Utah, a few miles northwest

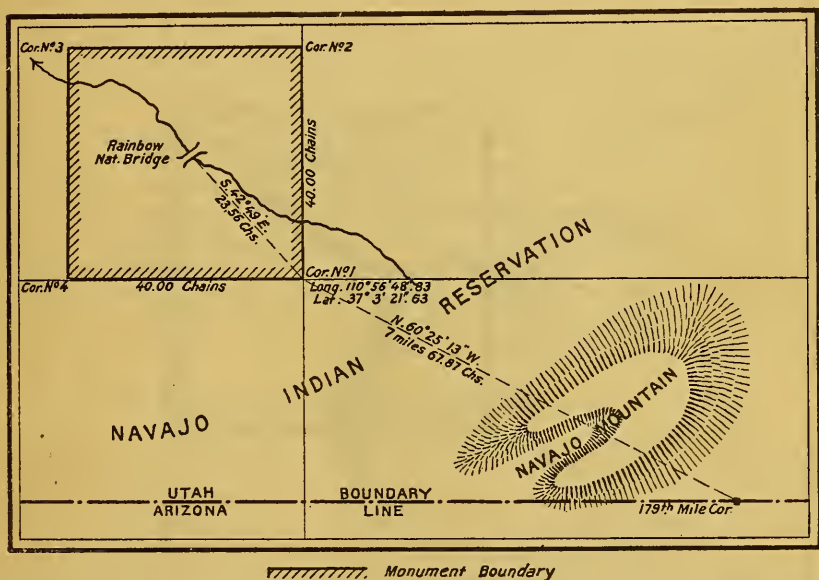


FIG. 8.—Rainbow Bridge National Monument, Utah, embracing 160 acres of land in square form, the southeast corner of which bears from one hundred and seventy-ninth mile corner on the Utah and Arizona boundary N. 60° 25' 13" W. 7 miles 67.87 chains distant; created September 25, 1909.

from Navajo Mountain, a well known peak and landmark, and spans a canyon and small stream which drains the northwestern slopes of this peak. Among the known extraordinary natural bridges of the world, this bridge is unique in that it is not only a symmetrical arch below but presents also a curved surface above, thus presenting, roughly, the character of the rainbow, for which it is named. Its height above the surface of the water is 309 feet and its span is 278 feet.

The existence of this natural wonder was first disclosed to William B. Douglass, an examiner of surveys of the General Land Office, on August 14, 1909, by a Piute Indian, called "Mike's-boy," later "Jim," who was employed in connection with the survey of the natural bridges in White Canyon, Utah.

Locally Inscription Rock and El Morro are known as separate and distinct monumental rocks. The latter, translated The Castle, is the rock standing out in bold relief to the east, while Inscription Rock is the name applied to the formation to the west, which is a part of the mesa. On the south side in the angle formed by the two, one extending east and the other south, is a great chamber or cavern, a natural amphitheater where secure refuge from storm or human foe could easily be secured. It is here, too, that the only spring within many miles wells up as if to make the natural fortification doubly secure. Upon these walls are many of the best preserved Spanish inscriptions, although there are quite a number 200 feet east, under the shadows of a stately pine tree and on the north side of El Morro. Most of them are as plain and apparently as legible as the day they were written: especially is this true of the older ones, carved during the sixteenth and seventeenth centuries.

The existence of extensive, prehistoric ruins on the very summit of Inscription Rock is another feature of interest. On the top of the rock a deep cleft or canyon divides the western end of the formation. On each of these arms is the remnant of large communal houses or pueblos. Some of the walls are yet standing and the ground plans of the structures are well defined. That on the south arm, and almost overhanging the cavern and spring, is approximately 200 by 150 feet; some of the buildings must have been more than one story in height.

The remarkable natural defenses of the site and the existence of the spring doubtless induced the builders to select this odd location. At some distant day it may be desirable to excavate these ruins and thus add to this historic spot attractions for the scientist as well as the general public who are interested in scenic and natural curiosities.

LEWIS AND CLARK CAVERN NATIONAL MONUMENT.

The feature of this monument is a limestone cavern of great scientific interest, because of its length and because of the number of large vaulted chambers it contains. It is of historic interest, also, because it overlooks for a distance or more than 50 miles the trail of Lewis and Clark along the Jefferson River, named by them. The vaults of the cavern are magnificently decorated with stalactites and stalagmite formations of great variety in size, form, and color, the equal of, if not rivaling, the similar formations in the well-known Luray caves in Virginia.

The cavern is located about 1 mile northeasterly from Limespur, a post office in Jefferson County, and a station on the Northern Pacific Railroad. Its two entrances, which are about 100 yards apart, are upon the walls of a deep canyon about 500 feet below the rim, and the cavern extends back therefrom approximately half a mile. The proclamation establishing this monument is as follows:

Whereas the unsurveyed tract of land containing an extraordinary limestone cavern and embracing one hundred and sixty acres, situated in township one north, range two west of the Montana principal meridian, Montana, and which was created the Lewis and Clark Cavern National Monument by proclamation dated the 11th day of May, 1908, has recently been definitely located by an official survey thereof, made under the direction of the Commissioner of the General Land Office, and such survey having determined that the tract in question lies wholly within the limits of the grant of the Northern Pacific Railway Company but has not yet been patented to that company;

And whereas, by its quitclaim deed the said Northern Pacific Railway Company relinquished unto the United States all its right, title, and interest to lot twelve, section seventeen, township one north, range two west of the Montana principal meridian, Montana, the same being the original tract proclaimed a national monument, for the purpose of maintaining thereon the said Lewis and Clark Cavern National Monument, under the condition that the instrument of relinquishment shall become void and the premises immediately revert to the grantor should the monument no longer be maintained.

Now, therefore, I, William H. Taft, President of the United States of America, by virtue of the power in me vested by section two of the act of Congress approved June 8, 1906, entitled "An act for the preservation of Ameri-

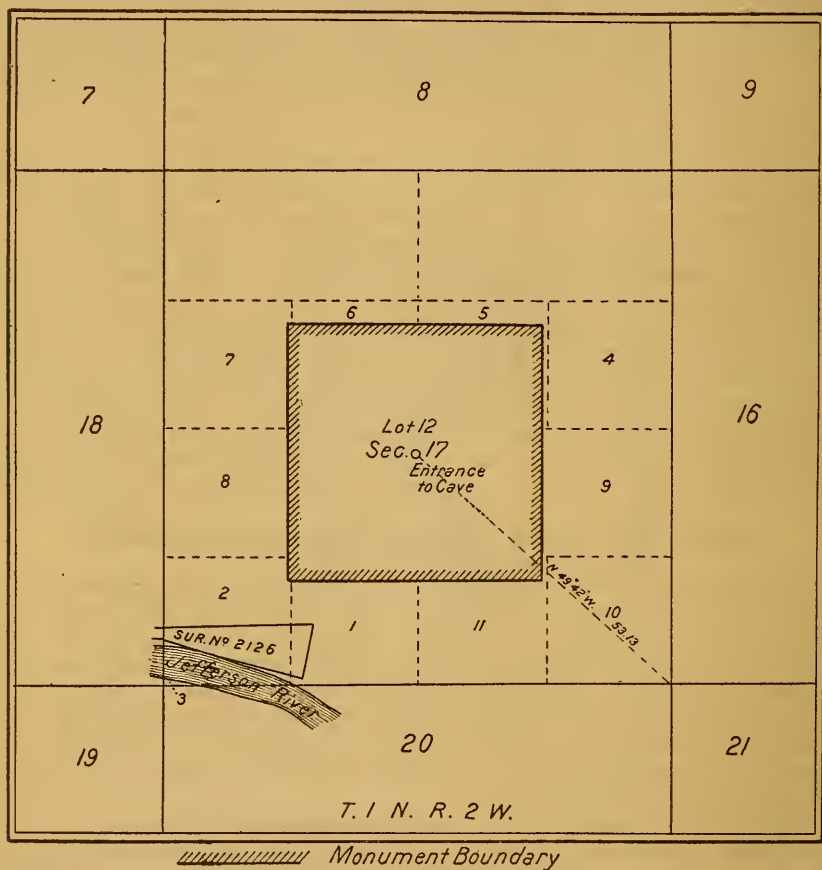


FIG. 10.—Lewis and Clark Cavern National Monument, Mont., embracing lot 12, sec. 17, T. 1 N., R. 2 W., Montana principal meridian; created May 11, 1908.

can antiquities," do hereby set aside and confirm as the Lewis and Clark Cavern National Monument the said tract, embracing one hundred and sixty acres of land, at and surrounding the limestone cavern in section seventeen, township one north, range two west, Montana, subject to the conditions set forth in the relinquishment and quitclaim deed No. 18129E, dated February 14, 1911, of the Northern Pacific Railway Company, the said tract being in square form and designated as lot twelve in the survey and deed, with side lines running north and south and all sides equidistant from the main entrance of the said cavern, the center of said entrance bearing north forty-nine degrees, forty-two minutes west, fifty-three and thirteen hundredths chains distant from the corner to sections sixteen, seventeen, twenty, and twenty-one, as shown upon the diagram hereto attached and made a part hereof.

Warning is hereby expressly given to all persons not to appropriate, injure, or destroy any of the natural formations in the cavern hereby declared to be national monument, nor to locate or settle upon any of the lands reserved and made a part of said monument by this proclamation.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this sixteenth day of May, in the year [SEAL.] of our Lord one thousand nine hundred and eleven, and of the independence of the United States the one hundred and thirty-fifth.

TUMACACORI NATIONAL MONUMENT.

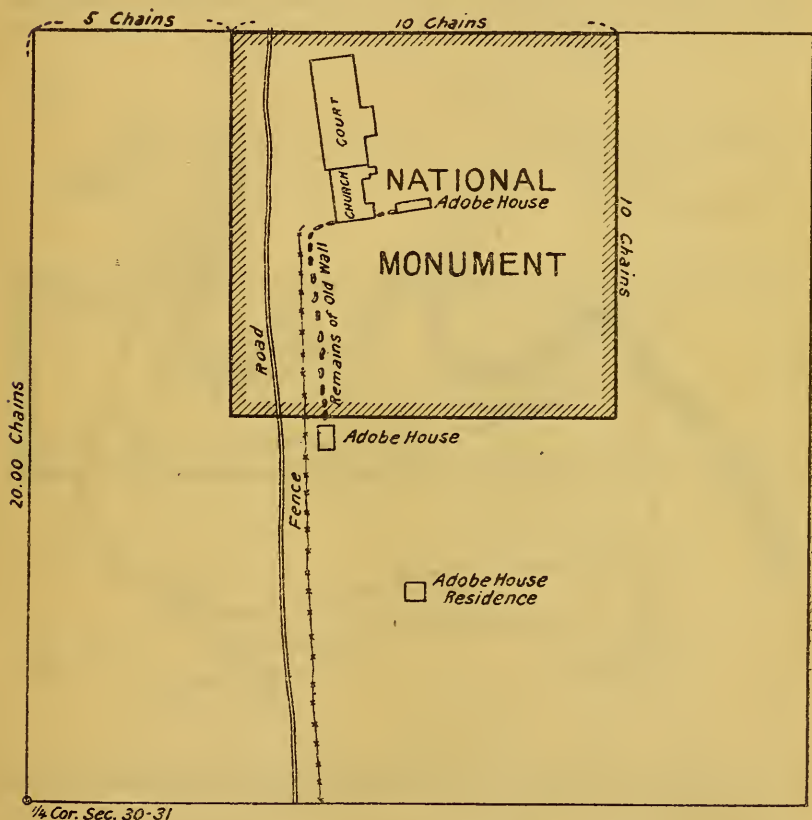


FIG. 11.—Tumacacori National Monument, Ariz., embracing the E. $\frac{1}{2}$ NW. $\frac{1}{4}$ SW. $\frac{1}{4}$ SE. $\frac{1}{4}$ and the W. $\frac{1}{2}$ NE. $\frac{1}{4}$ SW. $\frac{1}{4}$ SE. $\frac{1}{4}$, sec. 30, T. 21 S., R. 13 E., Gila and Salt River meridian; created September 15, 1908.

This monument embraces 10 acres of land relinquished to the United States by a homestead entryman for the purposes specified in the act of June 8, 1906. Upon the tract is located a very ancient Spanish mission ruin, erected probably, as appears from the reports, in the latter part of the sixteenth century. The church is in a remarkable state of preservation, owing to the fact that it was erected out of burned bricks and cement mortar.

MONTEZUMA CASTLE NATIONAL MONUMENT.

This structure is of very great interest, not only because of its picturesqueness, but for ethnological and other scientific reasons. It is strictly a cliff dwelling, with the added importance that it is also a communal house. Although very small as compared with the great ruins of Chaco Canyon, Canyon de Chelly, Mesa Verde, the Mancos, and other localities of the Southwest, it is so unique in location and structural design, and so perfectly preserved, that it may be said to have no equal in the United States.

The character of the material used in the Verde cliff ruins, adobe, rubble, and a soft calcareous stone, rendered the progress of disintegration and ruin somewhat rapid, though many centuries must



FIG. 12.—Montezuma Castle National Monument, Ariz., embracing the NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 16, the N. $\frac{1}{2}$ NE. $\frac{1}{4}$ and NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 17, T. 14 N., R. 5 E., Gila and Salt River meridian; created December 8, 1906.

have elapsed since the passing of the race. The Mojave Apache Indians, who occupied the valley at the advent of the white men, have no tradition respecting the existence of the people who formerly occupied this region. Montezuma's Castle, it is stated, is the only single perfect specimen and type of the architectural skill of the prehistoric cliff dwellers of this valley.

NATURAL BRIDGES NATIONAL MONUMENT.

This tract of land was first created a national monument on April 16, 1908.

A second proclamation, issued by the President September 25, 1909, includes, besides the three bridges originally reserved, a much more

extended territory, but within which, along the walls of the canyons in the vicinity of the bridges, are found many prehistoric ruins of cavern and cliff dwellings. There are also two cavern springs containing some prehistoric ruins, which are located approximately 13 and 19 miles southeast of the bridges, respectively. These cavern springs are included within the Natural Bridges Monument. They are located upon the ancient and only trail to the bridges from the south, and are important way stations in the desert surrounding this monument.

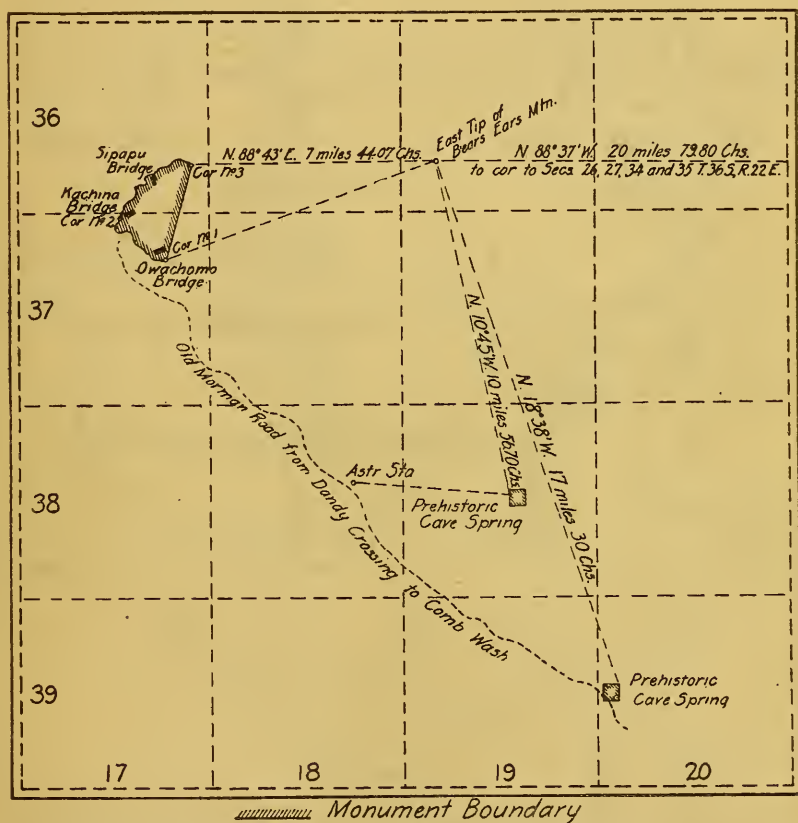


FIG. 13.—Natural Bridges National Monument, Utah, embracing a subtriangular tract in unsurveyed Tps. 36 and 37 S., R. 17 E., and two smaller tracts, one each in T. 38 S., R. 19 E., and T. 39 S., R. 20 E., Salt Lake meridian; created September 25, 1909.

GRAN QUIVIRA NATIONAL MONUMENT.

The Gran Quivira has long been recognized as one of the most important of the earliest Spanish church or mission ruins in the Southwest. Near by are numerous Indian pueblo ruins, occupying an area many acres in extent, which also, with sufficient land to protect them, was reserved. The outside dimensions of the church ruins, which is in the form of a short-arm cross, are about 48 by 140 feet, and its walls are from 4 to 6 feet thick and from 12 to 20 feet high.

The Gran Quivira National Monument is located $1\frac{1}{2}$ miles outside of the exterior boundaries of the Manzano National Forest, and is remote from the headquarters of any officer of this department.

MUKUNTUWEAP NATIONAL MONUMENT.

The Mukuntuweap National Monument, Utah, embraces the magnificent gorge of Zion Creek, called the Mukuntuweap Canyon by the

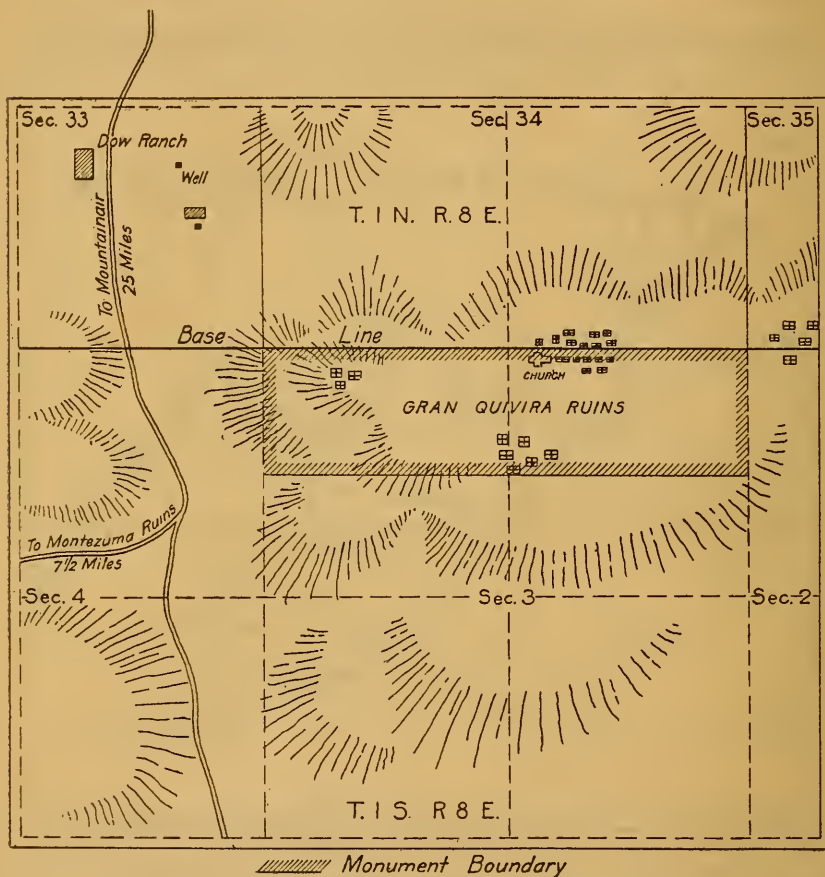


FIG. 14.—Gran Quivira National Monument, N. Mex., embracing unsurveyed N. $\frac{1}{2}$ N. $\frac{1}{4}$ sec. 3, T. 1 S., R. 8 E., New Mexico principal meridian; created November 1, 1909.

Powell Topographic Survey of southwestern Utah, Kanab sheet, and the same is of the greatest scientific interest. The canyon walls are smooth, vertical sandstone precipices, from 800 to 2,000 feet deep. These walls are unscalable within the limits of the boundaries of the reserve, except at one point about 4 miles from the southern and 6 miles from the northern extremity. The north fork of the Rio Virgin passes through the canyon, and it is stated that the views into the canyon from its rim are exceeded in beauty and grandeur only by the similar views into the Grand Canyon of the Colorado.

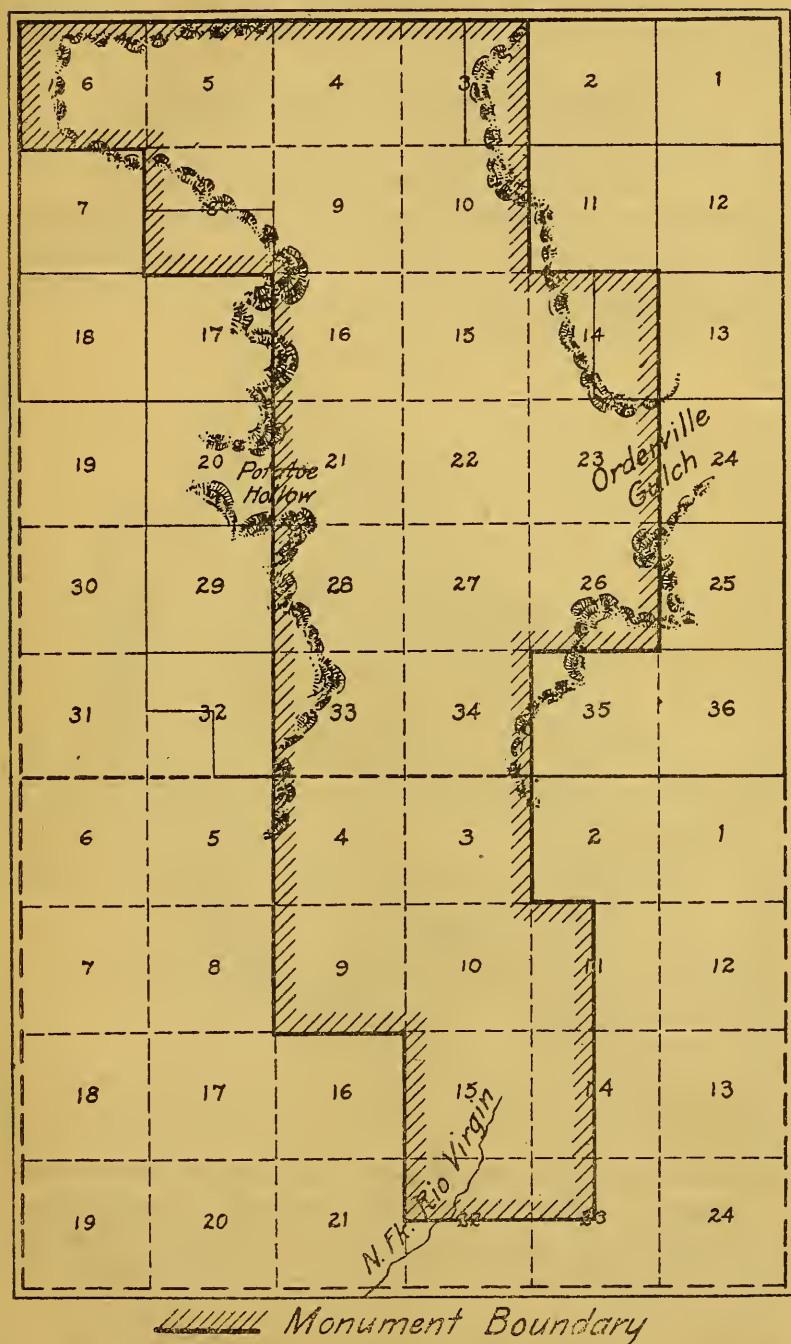


FIG. 15.—Mukuntuweap National Monument, Utah, embracing secs. 3, 4, 5, 6, 8, 9, 10, 14, 15, 16, 21, 22, 23, 26, 27, 28, 33, and 34, T. 40 S., R. 10 W., and all of the Mukuntuweap Canyon in T. 41 S., R. 10 W., Salt Lake meridian; created July 31, 1909.

At intervals along the west wall of the canyon are water courses which cross the rim and plunge into the gorge in waterfalls 800 to 2,000 feet high.

SHOSHONE CAVERN NATIONAL MONUMENT.

The Shoshone Cavern National Monument embraces 210 acres of rough, mountainous land. The cavern entrance is located upon the

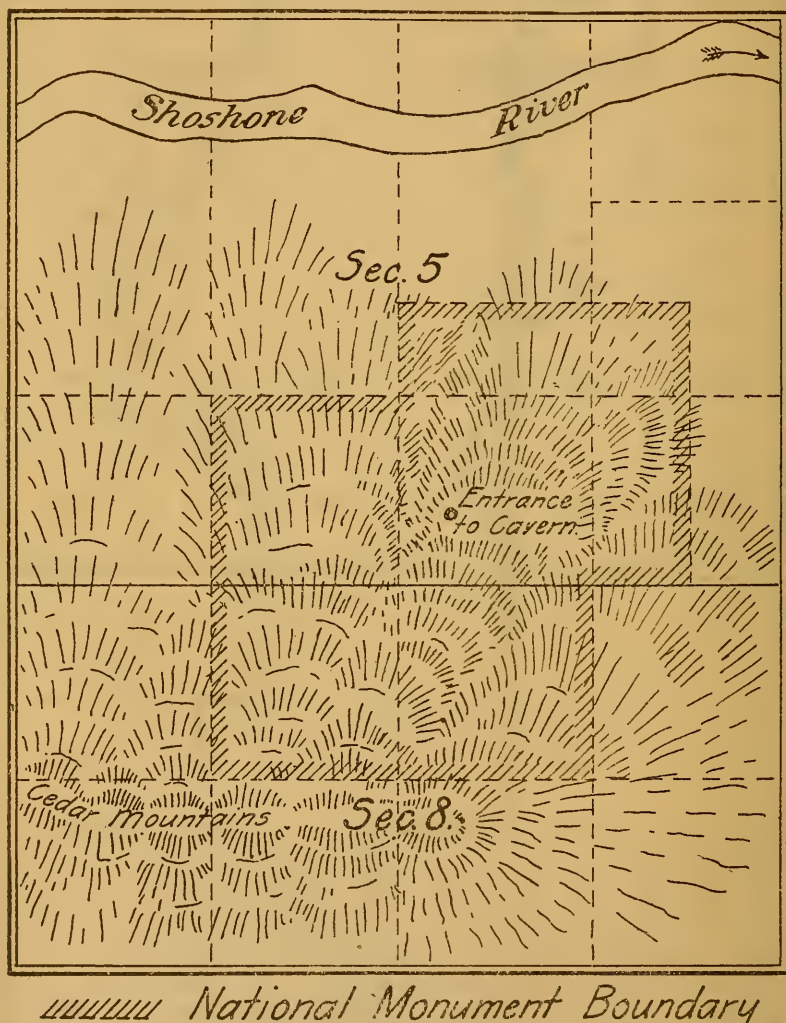


FIG. 16.—Shoshone Cavern National Monument, Wyo., embracing the SW. $\frac{1}{4}$ SE. $\frac{1}{4}$, W. $\frac{1}{4}$ SE. $\frac{1}{4}$ SE. $\frac{1}{4}$, SW. $\frac{1}{4}$ NE. $\frac{1}{4}$ SE. $\frac{1}{4}$, S. $\frac{1}{4}$ NW. $\frac{1}{4}$ SE. $\frac{1}{4}$; and SE. $\frac{1}{4}$ SW. $\frac{1}{4}$, sec. 5; the NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ and NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 8, T. 52 N., R. 102 W., sixth principal meridian; created September 21, 1909.

north face of Cedar Mountain, about 3 miles east of the great Shoshone Dam in Big Horn County, Wyo. From its entrance the cavern runs in a southwesterly direction for more than 800 feet, if measured in a direct line. The route which must be traveled to

reach this depth within the mountain, however, is so winding and irregular that at least a mile is passed before the terminus is reached. There are en route many dark pits and precipices of unknown depth and therefore of a special interest. The various chambers and passages are beautifully decorated with a sparkling crust of limestone crystals and from the roof hang myriads of stalactites.

SITKA NATIONAL MONUMENT, ALASKA.

This monument reservation, created under the act of June 8, 1906, embraces about 57 acres of comparatively level gravel plain formed



FIG. 17.—Sitka National Monument, Alaska, embracing a tract of land which includes the mouth of Indian River and adjacent territory near Sitka; created March 23, 1910.

by sea wash and by the deposits of Indian River, which flows through the tract. Upon this ground was located formerly the village of a warlike tribe—the Kik-Siti Indians—who, in 1802, massacred the Russians in old Sitka and thereafter fortified themselves and defended their village against the Russians under Baranoff and Lisianski. Here also are the graves of a Russian midshipman and six sailors, who were killed in a decisive battle in 1804; a celebrated "witch tree" of the natives; and 16 totem poles, several of which are examples of the best work of the savage genealogists of the Alaska clans, stand sentrylike along the beach.

DEVILS TOWER NATIONAL MONUMENT.

This extraordinary, natural monument has been known and utilized, doubtless, from time immemorial by the aborigines of the plains and mountains, for the American Indian of the last century was found to be directing his course to and from the hunt and foray by reference to this lofty pile. In their turn the white pioneers of civilization in their explorations of the great Northwest which began with the expedition of the Verendryes, pathfinders of the French colonies of Canada, in 1742, utilized the tower as a landmark, and still later the military expeditions into the Sioux and Crow Indian country during the Indian wars of the last century carried on operations within sight of the Devils Tower or directed their march by



FIG. 18.—Devils Tower National Monument, Wyo., embracing sec. 7 and the N. $\frac{1}{2}$ NE. $\frac{1}{4}$, the NE. $\frac{1}{4}$ NW. $\frac{1}{4}$, and lot No. 1, sec. 18, T. 53 N., R. 65 W.; the E. $\frac{1}{2}$ sec. 12 and the N. $\frac{1}{2}$ NE. $\frac{1}{4}$ sec. 13, T. 53 N., R. 66 W., sixth principal meridian; created September 24, 1906.

the aid of its ever-present beacon, for the tower is visible in some directions in that practically cloudless region for nearly 100 miles.

PINNACLES NATIONAL MONUMENT.

There are two groups of the so-called Pinnacles Rocks, known locally as the Big Pinnacles and the Little Pinnacles. The general characteristics of the two groups are similar. Each covers an area of about 160 acres, very irregular in outline.

The name is derived from the spirelike formations rising from 600 to 1,000 feet from the floor of the canyon, forming a landmark visible many miles in every direction. Many of the rocks are so

precipitous that they can not be scaled. A series of caves, opening one into the other, lie under each of the groups of rock. These caves vary greatly in size, one in particular, known as the Banquet Hall, being about 100 feet square with a ceiling 30 feet high. The caves are entered through narrow canyons, with perpendicular rock walls

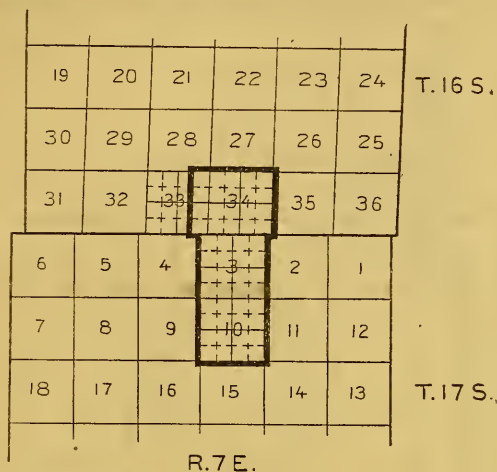


FIG. 19.—Pinnacles National Monument, Cal.; created January 16, 1908.

and overhanging boulders. One huge stone, called the Temple Rock, is almost cubical in form. It stands alone in the bottom of the canyon and its walls rise perpendicularly to a height of over 200 feet. There are also several specimens of "balancing rocks" in each of the groups.

COLORADO NATIONAL MONUMENT.

This area was set aside as a national monument by the President's proclamation of May 24, 1911, and is the latest monument to be created.

It is situated near Grand Junction, Colo., and the site is in a picturesque canyon, which has long been an attractive feature of that portion of the State. The formation is similar to that of the Garden of the Gods at Colorado Springs, Colo., only much more beautiful and picturesque. With the exception of the Grand Canyon of the Colorado it exhibits probably as highly colored, magnificent, and impressive examples of erosion, particularly of lofty monoliths, as may be found anywhere in the West. These monoliths are located in several contributory canyons. Some of them are of gigantic size, one being over 400 feet high, almost circular in cross section, and 100 feet in diameter at base.

CINDER CONE NATIONAL MONUMENT.

The Cinder Cone National Monument was created by proclamation dated May 6, 1907. It is situated within the Lassen Peak National

Forest, and with the adjacent area, embracing a lava field and Snag Lake and Lake Bidwell, is of scientific interest as illustrative of volcanic activity, and is of special importance in tracing the history of the volcanic phenomena of that vicinity.

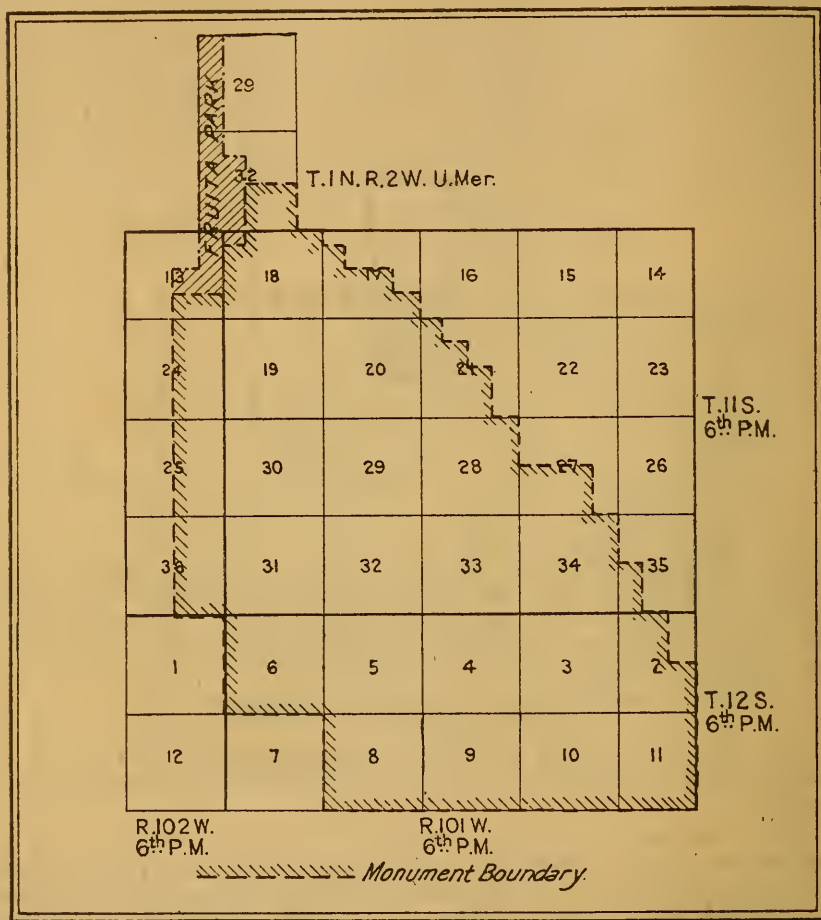


FIG. 20.—Colorado National Monument, Colo., embracing parts of Tps. 11 and 12 S., Rs. 101 and 102 W. of the sixth principal meridian, and part of sec. 32, T. 1 N., R. 2 W. of the Ute meridian, Colo., containing 13,883.06 acres.

LASSEN PEAK NATIONAL MONUMENT.

The Lassen Peak National Monument was created by proclamation dated May 6, 1907. It is situated within the Lassen Peak National Forest and marks the southern terminus of the long line of extinct volcanoes in the Cascade Range, from which one of the greatest volcanic fields in the world extends, and is of special importance in tracing the history of the volcanic phenomena of that vicinity.

GILA CLIFF-DWELLINGS NATIONAL MONUMENT.

The Gila Cliff-Dwellings National Monument was created by proclamation dated November 16, 1907. These cliff-dweller ruins are

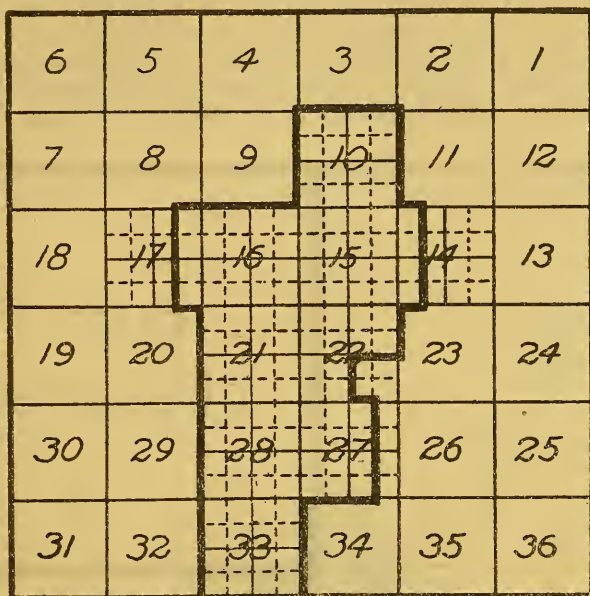


FIG. 21.—Cinder Cone National Monument, within Lassen Peak National Forest, Cal.

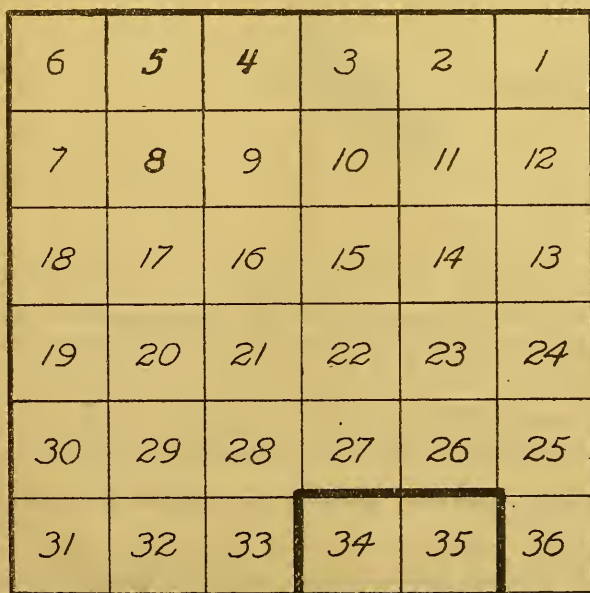


FIG. 22.—Lassen Peak National Monument, within Lassen Peak National Forest, Cal.

neither very large nor very important, but are located in a district in which few prehistoric ruins are found.

TONGO NATIONAL MONUMENT.

The Tonto National Monument was created by proclamation dated December 19, 1907. It is located in Gila County, Ariz., and embraces two prehistoric ruins of cliff dwellings located somewhat less than 2 miles south of the Salt River Reservoir constructed by the Reclamation Service in the valley of the Salt River within the Tonto Basin, and is about 5 miles southeasterly from the town of Roosevelt. The prehistoric ruin is situated in the high, flaring en-

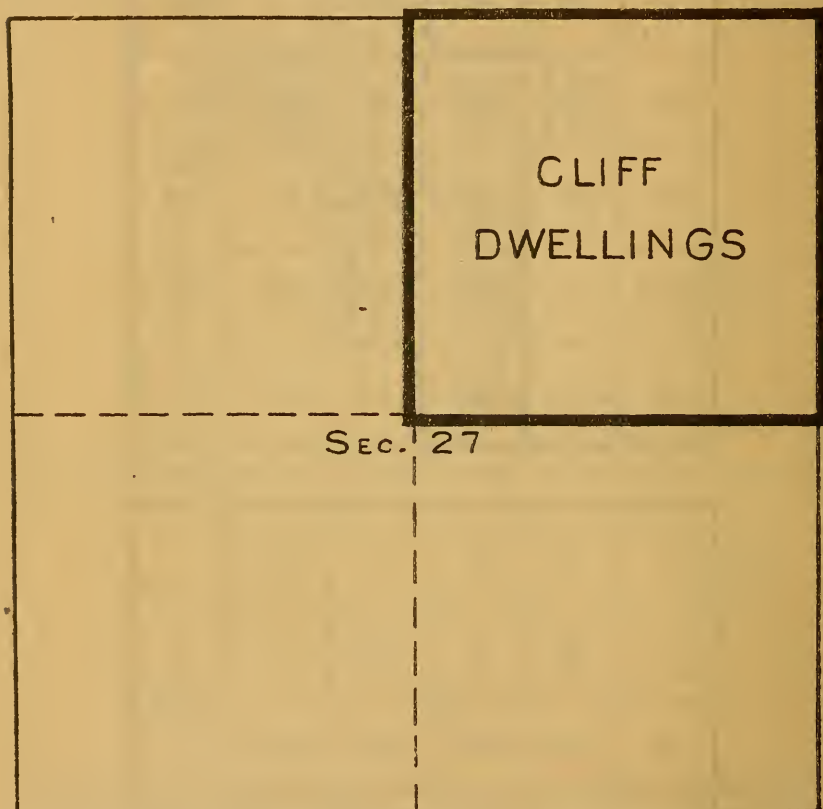


FIG. 23.—Gila Cliff-Dwellings National Monument, within Gila National Forest, N. Mex., embracing NE. $\frac{1}{4}$ of sec. 27, T. 12 S., R. 14 W., New Mexico principal meridian and base.

trance to a large, shallow cavern, is three stories high, approximately 60 feet wide and 30 feet deep, and contains 14 or more rooms.

GRAND CANYON NATIONAL MONUMENT, ARIZ.

A considerable portion of the area set aside by the proclamation creating this national monument is covered by three different proclamations, one of which created the Grand Canyon Forest Reserve, one the game preserve embracing that part of the national forest north of the river, and the third the monument proclamation. It is be-

lieved that the most wonderful portion of the canyon is contained within the present limits of the national monument and game pre-

Steps have been taken to create a national park of the Grand Canyon of the Arizona, and a bill (H. R. 6331) providing for such purpose was introduced in Congress April 20, 1911, and is now pending before that body. The Association of American Geographers has recommended that the above-mentioned park be designated as Powell National Park, and the Geological Society of America serves.



FIG. 24.—Tonto National Monument, unsurveyed sec. 34, T. 4 N., R. 12 E., Gila and Salt River meridian, Ariz., containing 640 acres.

has approved the naming of the national park in the Grand Canyon of the Colorado after its explorer, Maj. J. W. Powell.

JEWEL CAVE NATIONAL MONUMENT.

Jewel Cave, which is located 13 miles west and south of Custer, the county seat of Custer County, S. Dak., was discovered on August 18, 1900, by two prospectors, Albert and F. W. Michaud, whose attention was attracted by the noise of wind coming from a small hole in the limestone cliffs on the east side of Hell Canyon. In the hope of discovering some valuable mineral and the source of the wind, these men, in company with one Charles Bush, enlarged the

opening. Jasper and manganese are found in the cave, but to what extent is not definitely known.

The prospectors have followed the main descending wind passage for a distance of $1\frac{1}{2}$ miles, which point the explorers believe to be

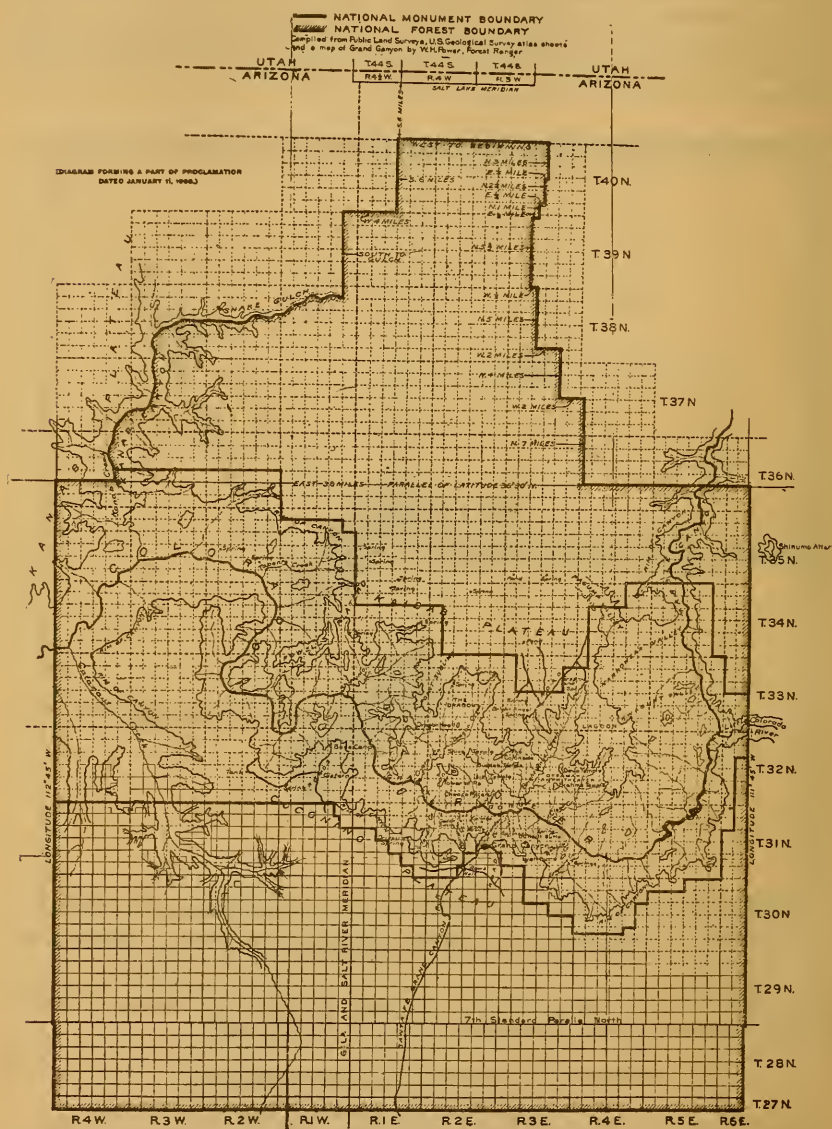


FIG. 25.—Grand Canyon National Monument, within Grand Canyon National Forest, Ariz.

from 600 to 700 feet below the entrance, and have explored numerous side galleries and passages. However, the cave is far from being fully explored.

The cave, as far as known, is located in limestone formation and is apparently the result of action of water. A prominent geologist who visited this cave believes it to be an extinct geyser channel. The cave, as far as explored, consists of a series of chambers, connected by narrow passages with numerous side galleries, which increase in size as the distance from the entrance becomes greater.

The explorers have been careful observers of the action of the wind within the cave. They have discovered that ordinarily the wind blows in and out of the cave for regular periods, the periods of

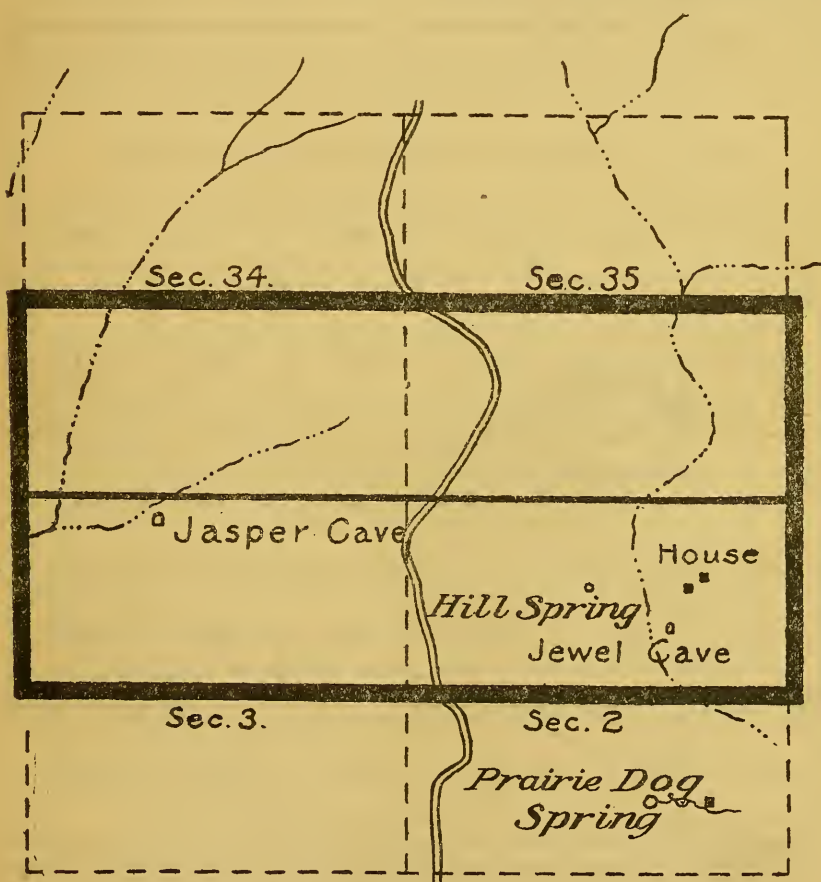


Fig. 26.—Jewel Cave National Monument, within Black Hills National Forest, S. Dak., Tps. 3 and 4 S., R. 2 E., Black Hills meridian.

blowing in and out being 15 hours each, although they have known the periods to be of 72 hours' duration. Other wind passages have been discovered in the vicinity of the cave.

WHEELER NATIONAL MONUMENT, COLO.

The lands embraced in this national monument are situated near the headwaters of the middle fork of Bellows Creek, a northern tributary of the Rio Grande del Norte, about 10 miles northeast of

Wagon Wheel Gap, Colo., and 2 miles south of the crest of the Continental Divide.

The tract lies on the southern slope of the ridge which forms the crest of the Continental Divide. It is traversed from north to south by numerous deep canyons with very precipitous sides, the intervening ridges being capped by pinnacle-like rocks, making it practically impossible to cross the tract from east to west, even on foot. There are also many crevices cutting the ridges transversely, making an intricate network of ravines separated by broken precipitous ledges and broken mesas.

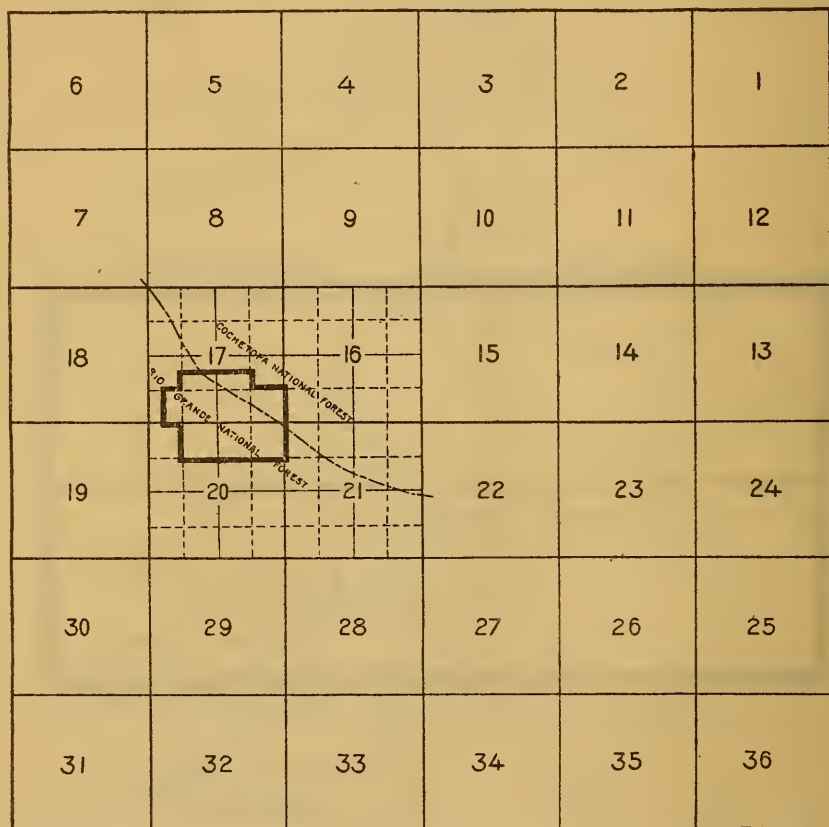


FIG. 27.—Wheeler National Monument, within Cochetopa and Rio Grande National Forests, Colo., T. 42 N., R. 2 E., New Mexico principal meridian and base.

It is probable that the formation found here is the result of a succession of outpourings of lava and showers of volcanic ash which have left a series of nearly horizontal strata of varying degrees of hardness. Numerous pebbles and breccia of a flint-like rock are imbedded in the softer lavas which were probably gathered up by the flowing lava mud from the original bedrock. The formation is for the most part scoriaceous tufa and trachyte, with some rhyolite. The effect of erosion on this formation has been to cut it into sharply defined forms of many kinds. The harder broken rocks imbedded in the lavas have acted as veritable chisels, greatly accelerating erosive

action and making the lines and angles more sharply defined than would be the case in ordinary weathering. This erosion is still going on at a remarkably rapid rate, making the place very interesting from the geological point of view.

The fantastic forms resulting from the rapid erosion make this spot one of exceptional beauty. The numerous winding canyons, broken ridges, pinnacles, and buttes form such striking and varied scenes that it will be much visited by tourists when it has been made accessible by the construction of roads and trails.

From the most reliable data it is believed that the ill-fated expedition of John C. Fremont, in 1848, reached this immediate vicinity, when disaster came upon the party, compelling it to turn back. Skeletons of mules, bits of harness, and camp equipage are found here, lending force to the recorded data.

MOUNT OLYMPUS NATIONAL MONUMENT, WASH.

This monument was set aside by Presidential proclamation of March 2, 1909, and contained approximately 608,640 acres. It was created for the purpose of preserving many objects of great and unusual scientific interest, embracing numerous glaciers, and the territory has also been for time immemorial the summer range and breeding ground of the Olympic elk, a species which is rapidly decreasing in numbers. A bill was introduced in Congress on July 15, 1911, providing for the setting aside as a national park the same tract of land as was set aside by proclamation of the President creating the Mount Olympus National Monument.

By Presidential proclamation of April 17, 1912, certain lands have been eliminated from the original area embraced in the monument. This proclamation providing therefor is as follows:

I, WILLIAM H. TAFT, President of the United States of America, by virtue of the power in me vested by section 2 of the act of Congress approved June 2, 1906, entitled "An act for the preservation of American antiquities," do hereby declare and proclaim that the south half of the southwest quarter of section twenty-one, and the north half of the the northwest quarter of section twenty-eight, in township twenty-four north, range eight west, Willamette meridian, Washington, be, and the same are hereby, eliminated from the Mount Olympus National Monument. The provisions of the proclamation of March 2, 1909, shall remain in full force and effect as to all other lands thereby reserved as a national monument.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this seventeenth day of April, in the [SEAL.] year of our Lord one thousand nine hundred and twelve, and of the Independence of the United States the one hundred and thirty-sixth.

OREGON CAVES NATIONAL MONUMENT, OREG.

The Oregon Caves or "Marble Halls" of Josephine County, discovered in 1874, are located in the Siskiyou National Forest, about 30 miles south of Grants Pass in Cave Mountain, a peak of the Greyback Range, that divides the headwaters of the Applegate and Illinois Rivers, and connects with the Siskiyou Mountains near the north line of California.

Cave Mountain, the peak which contains these caves, rises to an elevation of about 6,000 feet, and is of limestone formation. The

main openings around which the national monument has been created are at an elevation of 4,000 feet, but the entire mountain side for 5 or 6 miles shows caverns of various sizes and in all probability throughout its interior is honeycombed like the portion that has been explored.



FIG. 28.—Mount Olympus National Monument, within Olympic National Forest, Wash.

These caves are more of a series of galleries than of roomy caverns, though many beautiful rooms have been discovered, while miles of galleries have been visited; but there are thousands of passageways leading in all directions—partly closed by stalactites—that have never

been opened, and with the distant and unexplored openings on the opposite side of the mountain the magnitude of the Oregon Caves can be said to be practically unknown.

Many small streams are found at different elevations, and larger bodies of running water can be heard in pits bottomless so far as

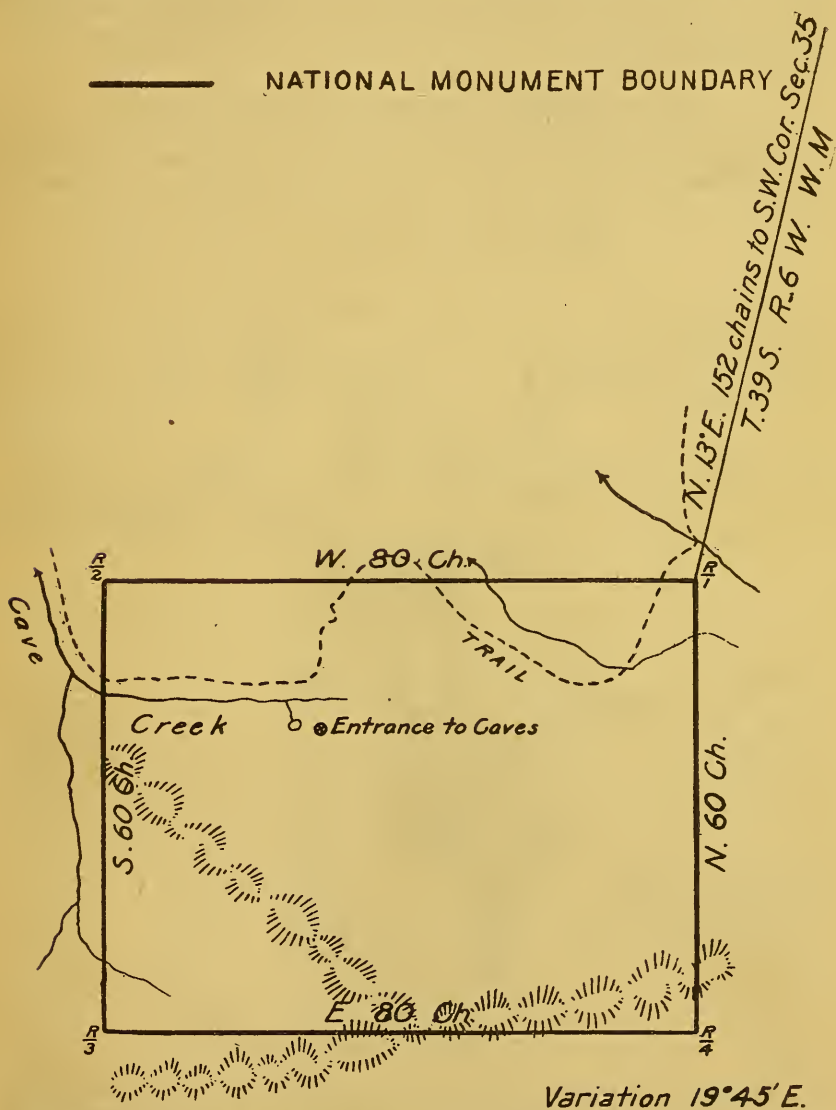


FIG. 29.—Oregon Caves National Monument, within Siskiyou National Forest, Oreg.

measured (by 300-foot line). This running water probably accounts for currents of wind that in some of the galleries blow so hard as to extinguish an open light at once.

The lime deposits take many beautiful forms—massive pillars, delicate stalactites of alabaster whiteness with the crystal drop of

water carrying its minute deposit of lime from which they are formed, and broad sheets resembling drapery with graceful curves and waves that were certainly made by varying currents of wind during formation.

The Forest Service has rebuilt and improved the trails leading to the caves from each side of the divide in order to more easily protect the valuable forest surrounding and to make the caves more accessible to tourists.

DEVILS POSTPILE NATIONAL MONUMENT, CAL.

The Devils Postpile consists of basaltic rocks laid down in the form of an immense pile of posts, and while there are similar formations in

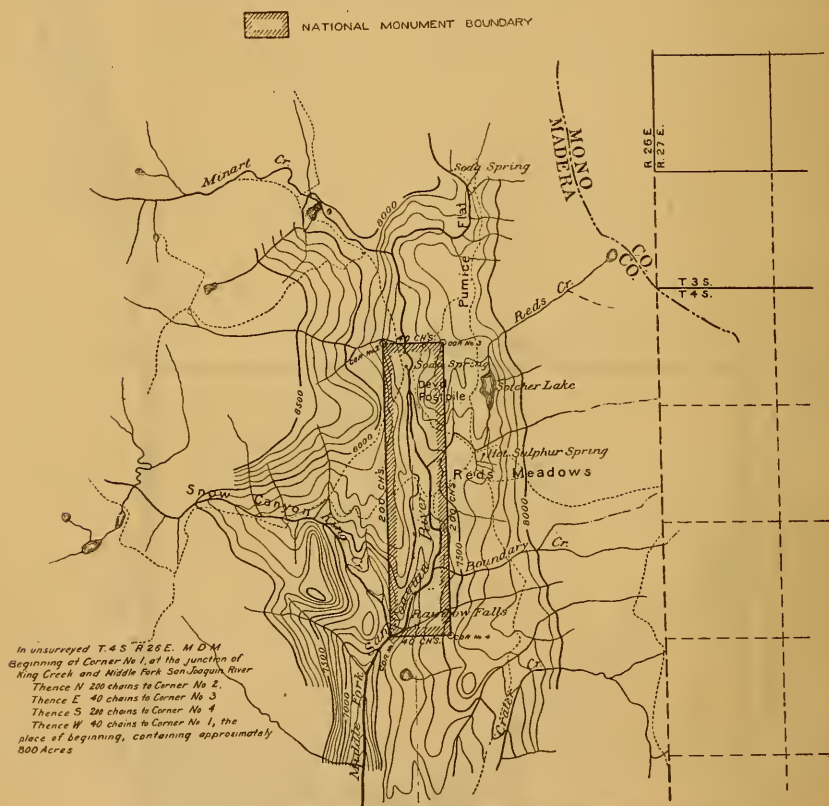


FIG. 30.—Devils Postpile National Monument, Cal.

different parts of the country, this is especially prominent, being one of the most noted of its kind on the continent, and said to rank with the famous Giants Causeway on the coast of Antrim, in the north of Ireland.

Below the postpile and above the junction of King Creek and the middle fork of the San Joaquin River is Rainbow Falls, similar to the well-known Vernal Falls of the Yosemite Valley, and one of the few of its kind on the continent.

BIRD RESERVES.

All of the bird reserves have been created through reference from the Interior Department to the President of forms of Executive orders providing therefor. These reserves are regarded as in all essential particulars reservations of public lands for public use or other purposes, for which there are numerous precedents. The first specific act of Congress providing for the protection of birds by bird reserves created by Executive order was introduced by Hon. John F. Lacy, of Iowa, and became a law on June 28, 1906. (34 Stat., 536.) This act made it unlawful to kill birds, to take their eggs, or to willfully disturb birds upon the reservations, and it provides a fine of not exceeding \$500, or imprisonment for not exceeding six months, or both fine and imprisonment, for each conviction secured. This law was substantially reenacted in the new penal code approved March 4, 1909 (35 Stat., 1104), in the following language:

SEC. 84. Whoever shall hunt, capture, willfully disturb, or kill any bird of any kind whatever, or take the eggs of any such bird, on any lands of the United States which have been set apart or reserved as breeding grounds for birds by any law, proclamation, or Executive order, except under such rules and regulations as the Secretary of Agriculture may from time to time prescribe, shall be fined not more than five hundred dollars, or imprisoned not more than six months, or both.

The reservations now existing, which are being administered under the direction of the Biological Survey, Department of Agriculture, are 52 in number, as follows:

Bird reserves created.

Name of reservation.	Date.	Location.	Area.
Pelican Island.....	Mar. 14, 1903	East Florida coast.....	5.50 acres.
Breton Island.....	Oct. 4, 1904	Southeast coast of Louisiana.....	Unknown.
	Nov. 11, 1905		
Stump Lake.....	Mar. 9, 1905	North Dakota.....	27.39 acres.
Huron Islands.....	Oct. 10, 1905	Lake Superior, Mich.....	Unknown.
Siskiwit Islands.....	do.	do.	Do.
Passage Key.....	do.	Tampa Bay, Fla.....	36.37 acres.
Indian Key.....	Feb. 10, 1906	do.	90 acres.
Tern Islands.....	Aug. 8, 1907	Mouths of Mississippi River, La.....	Unknown.
Shell Keys.....	Aug. 17, 1907	South Louisiana coast.....	Do.
Three Arch Rocks.....	Oct. 14, 1907	West Oregon coast.....	Do.
Flattery Rocks.....	Oct. 23, 1907	West Washington coast.....	Do.
Quillayute Needles.....	do.	do.	Do.
Copalis Rock.....	do.	do.	Do.
East Timbalier Island.....	Dec. 7, 1907	South Louisiana coast.....	Do.
Mosquito Inlet.....	Feb. 24, 1908	East Florida coast.....	Do.
Tortugas Keys.....	Apr. 6, 1908	Florida Keys, Fla.....	Do.
Klamath Lake.....	Aug. 8, 1908	Oregon and California.....	Do.
Key West.....	do.	Florida Keys, Fla.....	Do.
Lake Malheur.....	Aug. 18, 1908	Oregon.....	Do.
Chase Lake.....	Aug. 28, 1908	North Dakota.....	Do.
Pine Island.....	Sept. 15, 1908	West Florida coast.....	Do.
Matlacha Pass.....	Sept. 26, 1908	do.	Do.
Palma Sola.....	do.	do.	Do.
Island Bay.....	Oct. 23, 1908	Florida.....	Do.
Loch Katrine.....	Oct. 26, 1908	Wyoming.....	Do.
Hawaiian Islands.....	Feb. 3, 1909	Hawaii.....	Do.
East Park.....	Feb. 25, 1909	California.....	Do.
Cold Springs.....	do.	Oregon.....	Do.
Shoshone.....	do.	Wyoming.....	Do.
Pathfinder.....	do.	do.	Do.
Bellefourche.....	do.	South Dakota.....	Do.
Strawberry Valley.....	do.	Utah.....	Do.
Salt River.....	do.	Arizona.....	Do.
Deer Flat.....	do.	Idaho.....	Do.
Minidoka.....	do.	do.	Do.
Willow Creek.....	do.	Montana.....	Do.
Carlsbad.....	do.	New Mexico.....	Do.
Rio Grande.....	do.	do.	Do.

Bird reserves created—Continued.

Name of reservation.	Date.	Location.	Area.
Keechelus Lake.....	Feb. 25, 1909	Washington.....	Unknown.
Kachess Lake.....	do.....	do.....	Do.
Clealum Lake.....	do.....	do.....	Do.
Bumping Lake.....	do.....	do.....	Do.
Conconully.....	do.....	do.....	Do.
Bering Sea.....	Feb. 27, 1909	Alaska.....	Do.
Pribilof.....	do.....	do.....	Do.
Tuxedni.....	do.....	do.....	Do.
Farallon.....	do.....	California.....	Do.
Culebra.....	do.....	Porto Rico.....	Do.
Yukon Delta.....	do.....	Alaska.....	Do.
St. Lazaria.....	do.....	do.....	Do.
Bogoslof.....	Mar. 2, 1909	do.....	Do.
Clear Lake.....	Apr. 11, 1911	California.....	Do.

BIRD RESERVES ENLARGED.

Pelican Island.....	Jan. 26, 1909	Florida.....	Unknown.
Mosquito Inlet.....	Apr. 2, 1909	do.....	Do.

One new reserve for the protection of native wild birds was created during the year, to wit, the Clear Lake Reservation, in California, which was set aside by Executive order of April 11, 1911. A number of these reservations lie within tracts reserved or set aside for purposes other than the protection of birds, such as reclamation withdrawals and naval reserves, but in all such cases the administration of the bird reservation is made subject to the use of the reservation under the primary and more important segregation.

REPORT ON
PLATT AND WIND CAVE NATIONAL PARKS,
SULLYS HILL PARK, CASA GRANDE RUIN,
MUIR WOODS, PETRIFIED FOREST, AND
OTHER NATIONAL MONUMENTS, INCLUD-
ING LIST OF BIRD RESERVES

1912

COMPILED IN THE OFFICE OF
THE SECRETARY OF THE INTERIOR



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REPORT ON PLATT AND WIND CAVE NATIONAL PARKS SULLYS HILL PARK, CASA GRANDE RUIN, MUIR WOODS, PETRIFIED FOREST, AND OTHER NATIONAL MONUMENTS, TOGETHER WITH LIST OF BIRD RESERVES.

PLATT NATIONAL PARK.

By the acts of Congress of July 1, 1902 (32 Stat., 641), and April 21, 1904 (33 Stat., 220), 629.33 and 218.89 acres, respectively, at the town of Sulphur, Okla. (then Ind. Ter.), were segregated as the "Sulphur Springs Reservation," which designation, by joint resolution approved June 29, 1906, was changed to "Platt National Park."

The park, with a total area of 848.22 acres, extends in irregular form a distance of approximately 3 miles from northeast to southwest along Travertine Creek, including a portion of Rock Creek, which empties into the former, and it has a circuit of 9 miles.

Within the park are 33 known mineral and 2 nonmineral springs. The principal groups are the Bromide and Bromide-Sulphur Springs in the southwestern part of the park, Beach and Pavilion Springs in the northwestern corner, and the Wilson group in the southern part. Sulphur springs predominate, but there are also bromide, soda, and iron varieties. The Antelope and Buffalo Springs, nonmineral in character, are situated at the extreme northeastern end of the park with an elevation of 1,083 feet above sea level and an approximate discharge of 5,000,000 gallons daily into Travertine Creek.

The appropriation for the care and maintenance of the park for the fiscal year 1912 was increased by Congress to \$10,000, as against the appropriation of \$5,000 for the preceding year. The superintendent of the park has accordingly been enabled to make numerous improvements. The more important springs have been walled with a view to confining their flow, new cement approaches have been installed, and necessary repairs made to pavilions. The roads in the park have been greatly improved by grading, graveling, and installation of culverts, drains, and retaining walls. Cement sidewalk to the extent of 4,466 square feet has been laid, and cement stairway built upon the slope near Bromide Spring. Extensive repairs have been made to the park bridges and much new fencing built. Repairs have also been made to the buildings in the park, and with exception of the building used for administrative purposes they are in a generally satisfactory condition. A new barn has been constructed in the park, farming machinery bought, and a team of mules purchased, ample forage for which is grown in the park. Sixty young trees have been planted.

One permit for transportation of passengers in and through the park, using a two-seated vehicle, was issued, as were several other permits for sale of water, license fees being exacted in each case. The total receipts from all sources during the year were \$165.50.

Seven hundred and thirty-four campers made use of camping grounds in the park for more than three days. The park records show that 89,371 persons visited Bromide Springs during the year. Many of these were residents of Sulphur and were counted each time they visited the springs. From the best information obtainable, however, the actual number of individuals who visited the park, inclusive of residents of Sulphur, was about 31,000.

Two thousand head of cattle were driven through the park, in changing them from one pasture to another, or for getting them to available watering places, or for shipment to market.

In the act making appropriation for the current and contingent expenses of the Bureau of Indian Affairs approved August 24, 1912, provision was made as follows:

For the construction of a sanitary sewer system in Platt National Park, Okla., to be expended under the direction of the Secretary of the Interior, seventeen thousand five hundred dollars: *Provided*, That the said sum shall be available whenever a like amount is appropriated and made available by the town of Sulphur, Okla., for the same purposes: *Provided further*, That whenever said appropriation is made by the town of Sulphur, Okla., the entire amount, or so much thereof as may be necessary, of the total appropriation made by this act and the town of Sulphur, Okla., shall be expended under the direction of the Secretary of the Interior.

The matter was brought to the attention of the municipal authorities of Sulphur, and thereafter an issue of bonds was authorized by the town with a view to procuring the funds necessary to aid in the construction of the sewer. The above-mentioned amount having been deposited with the department, an inspector was thereupon detailed to make examination of the park with a view to installation of the sewer provided for by the act if found practicable with the money available for the purpose.

REGULATIONS OF JUNE 10, 1908.

Pursuant to the authority conferred by the acts of Congress approved July 1, 1902 (32 Stat., 656), April 21, 1904 (33 Stat., 220), and the Oklahoma statehood act of June 16, 1906 (34 Stat., 272), the following rules and regulations for the government of the Platt National Park (formerly Sulphur Springs Reservation), in Oklahoma, are hereby established and made public:

1. It is forbidden to injure in any manner any of the springs, mineral deposits, or natural features within the park.

2. It is forbidden to cut or injure any timber or plants growing on the park lands, or to deface or injure any Government property.

3. No camping shall be permitted within 1,000 feet of any spring, nor upon any land except such as may be specifically designated for that purpose by the superintendent. Fires shall not be lighted except by the express permission of the superintendent; when so allowed, campers shall use only dead or fallen timber for fuel, and the utmost care must be exercised at all times to avoid setting fire to the timber and grass.

4. It is forbidden for any person to deposit garbage or refuse upon the park lands, except at places designated for that purpose by the superintendent, or to contaminate any of the springs or streams therein, or to divert or conduct the waters of such springs or streams from the natural or regular course.

5. No person shall remove from any of the bromide, iron, or soda springs more than 1 gallon of water in any one day, nor remove from any of the other springs more than 5 gallons in any one day, nor shall any water be taken therefrom for commercial purposes, except in pursuance of a license issued by the Secretary of the Interior. Whenever in his judgment the circumstances warrant, the superintendent may prohibit the use of the waters of any of the springs in the park other than for immediate drinking purposes at such springs, the facts in such case to be reported to the Secretary of the Interior.

6. Hunting or killing, wounding or capturing any bird or wild animal on the park lands, except dangerous animals when necessary to prevent them from destroying life or inflicting an injury, is prohibited. The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing such birds or wild animals, or in possession of game killed on the park lands under other circumstances than prescribed above, will be taken up by the superintendent and held subject to the order of the Secretary of the Interior, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation and the actual owner thereof was not a party to such violation. Firearms will only be permitted in the park on written permission from the superintendent thereof.

7. Fishing with nets, seines, traps, or by the use of drugs or explosives, or in any other way than with hook and line, is prohibited. Fishing for purposes of merchandise or profit is forbidden. Fishing may be prohibited by order of the superintendent in any of the waters of the park, or limited therein to any specified season of the year, until otherwise ordered by the Secretary of the Interior.

8. No person will be permitted to reside permanently, engage in any business, or erect buildings or other improvements in the park, without permission, in writing, from the Secretary of the Interior.

9. The herding, grazing, or otherwise trespassing of cattle or loose stock of any kind within the park is strictly forbidden. Stock or cattle may be driven across the park, but must be confined to the roads and kept in motion under competent care while in the reservation.

10. No vehicles will be permitted to travel through the park except upon the roads designated for such traffic by the superintendent, and driving or riding over roads or bridges at a high rate of speed is prohibited.

11. Private notices or advertisements shall not be posted or displayed within the park, except such as may be necessary for the convenience and guidance of the public.

12. The sale of intoxicating liquors in the park is strictly forbidden.

13. No gambling or game of chance shall be permitted within the limits of the park; nor shall any person use profane or obscene lan-

guage, commit or maintain a nuisance, or be guilty of disorderly conduct or any act involving immorality therein.

14. Persons who render themselves obnoxious by disorderly conduct or bad behavior, or who violate any of the foregoing rules, will be summarily removed from the park and will not be allowed to return without permission, in writing, from the Secretary of the Interior or the superintendent of the park.

No lessee or licensee shall retain in his employ any person whose presence in the park shall be deemed and declared by the superintendent to be subversive of the good order and management of the reservation.

15. Any person who violates any of the foregoing regulations will be deemed guilty of a misdemeanor, and be subjected to a fine, as provided by the act of April 21, 1904, of not less than \$5 nor more than \$100 and may be imprisoned for a term of not more than six months for each offense.

WIND CAVE NATIONAL PARK.

The act of Congress approved January 9, 1903 (32 Stat. 765), reserved a tract of land containing 10,522 acres in the State of South Dakota, 12 miles east of the town of Hot Springs and about the same distance southeast of Custer, as a public park, to be known as the Wind Cave National Park.

With the consent of the Attorney General, Mr. Seth Bullock, marshal for the district of South Dakota, has been continued in general charge of the reservation in an advisory capacity, and the superintendent confers with him in regard to the administration thereof. The course pursued has aided in the effective management of the park during the park season. The present superintendent, A. C. Boland, was appointed May 1, 1911, succeeding R. J. Pilcher, who resigned on that date.

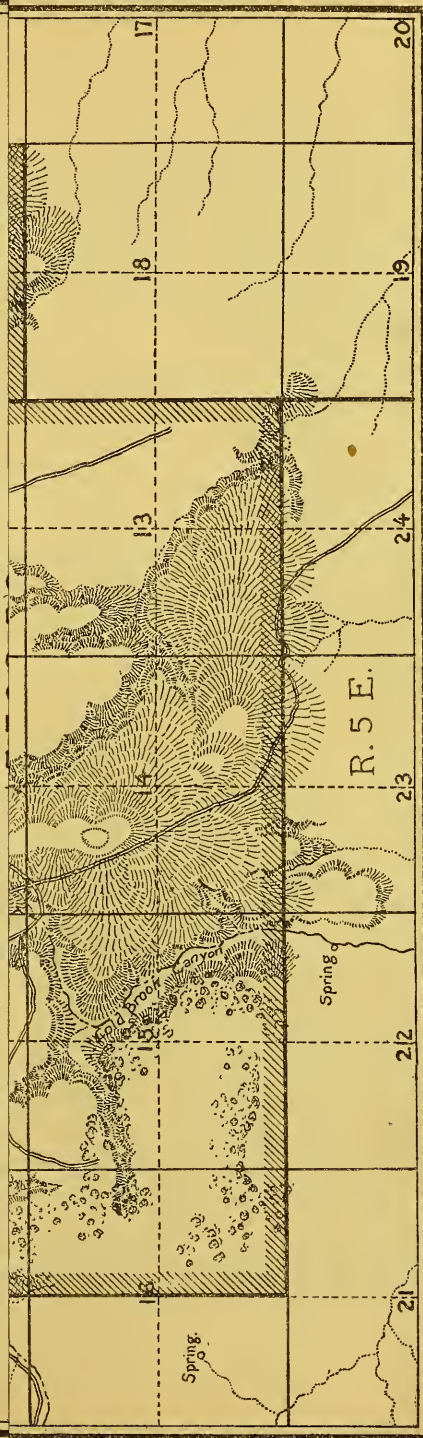
At the time of the creation of the park there were 10 entries covering lands within the park, aggregating 1,519.15 acres. Since that date the Government has secured title to all of the lands within the park except the NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ and NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 35, T. 5 S., R. 5 E., Black Hills meridian. Jonathan C. West patented December 31, 1904, 80 acres, which is now owned by W. A. Rankin, formerly a superintendent of the park. For administrative reasons it is desirable that this private holding be eliminated from the park, and it is recommended that adequate appropriation be made by Congress for the purpose.

During the past year 3,199 tourists entered the park, of whom 2,410 came in licensed vehicles and the remainder in private conveyances. There were 86 campers in the reservation during the season. No stock was driven through the park.

Eight permits were granted for transportation of passengers through the park, at the rate of \$50 per vehicle, seven of which were for use of automobiles and one by wagon. The roads in the park are in good condition, but there is need of constant repair work, especially after rains. Three new bridges were built during the year; the Wind Cave Hill was graded and made wide enough to permit two hacks or automobiles to pass at any point; ditches were dug on both

WIND CAVE NATIONAL PARK

Embracing Sections 34, 35 and 36, T. 5 S., R. 5;
Sections 1, 2, 3, E $\frac{1}{2}$ of 4, E $\frac{1}{2}$ of 9, and Sec's 10, 11, 12, 13, 14, 15, E $\frac{1}{2}$
of 16, T. 6 S., R. 5; Section 31, T. 5 S., R. 6; Sections 6



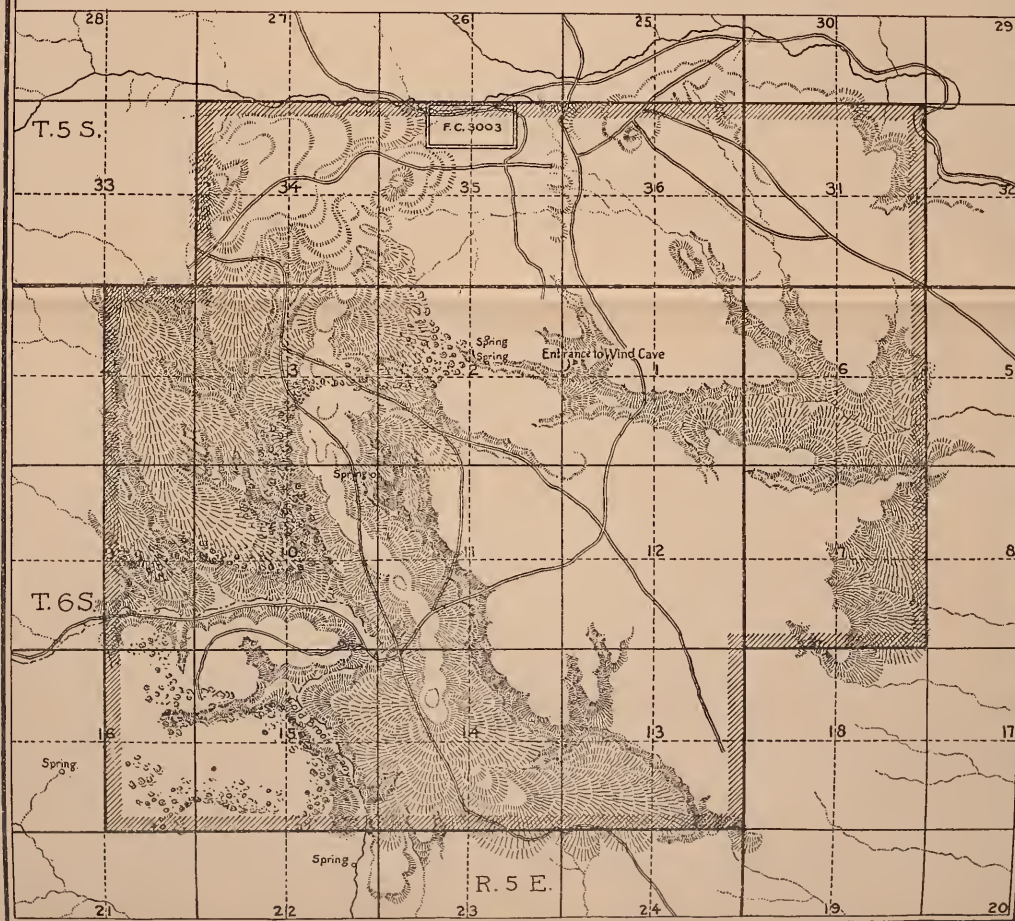
WIND CAVE NATIONAL PARK

Embracing Sections 34, 35 and 36, T. 5 S., R. 5;
Sections 1, 2, 3, E $\frac{1}{2}$ of 4, E $\frac{1}{2}$ of 9, and Sec's 10, 11, 12, 13, 14, 15, E $\frac{1}{2}$
of 16, T. 6 S., R. 5; Section 31, T. 5 S., R. 6; Sections 6
and 7 T. 6 S., R. 6,

All East of BLACK HILLS MERIDIAN

SOUTH DAKOTA

Containing 10,522.17 acres.



sides of the road to carry away water; and culverts were put in where needed. The driveway at the superintendent's house was also widened. Gravel and stones on the north side of the house were removed and grass seed sown. Several trees were also planted. The water tank was repaired and a fence built around it.

One fire occurred in the park, but it was extinguished before much damage was done.

Within the cave considerable repair work has been done on bridges, stairs, and paths. Two new bridges were built and eight new stairways.

A national game preserve has been established in the Wind Cave National Park under the provisions of "An act making appropriations for the Department of Agriculture for the fiscal year ending June thirtieth, nineteen hundred and thirteen," approved August 10, 1912 (37 Stat., 293), as follows:

For the establishment of a national game preserve, to be known as the Wind Cave National Game Preserve, upon the land embraced within the boundaries of the Wind Cave National Park, in the State of South Dakota, for a permanent national range for a herd of buffalo to be presented to the United States by the American Bison Society, and for such other native American game animals as may be placed therein. The Secretary of Agriculture is authorized to acquire by purchase or condemnation such adjacent lands as may be necessary for the purpose of assuring an adequate, permanent water supply and to inclose the said game preserve with a good and substantial fence and to erect thereon all necessary sheds and buildings for the proper care and maintenance of the said animals, twenty-six thousand dollars, to be available until expended.

It is understood that steps are now being taken by the Secretary of Agriculture to acquire the necessary lands.

GENERAL REGULATIONS OF MARCH 30, 1912.

Pursuant to authority conferred by the act of Congress approved January 9, 1903, the following rules and regulations for the government of the Wind Cave National Park, in South Dakota, are hereby established and made public:

1. It is forbidden to remove or injure the specimens or formations in and around the Wind Cave, or to deface the same by written inscription or otherwise, or to injure or disturb in any manner or carry off any of the mineral deposits, specimens, natural curiosities, or wonders on the Government lands within the park.

2. No person shall be permitted to enter the cave unless accompanied by the superintendent or other park employee, or by competent guides.

3. It is forbidden to cut or injure any timber growing on the park lands, or to deface or injure any Government property. Camping parties will be allowed to use dead or fallen timber for fuel.

4. Fires should be lighted only when necessary and completely extinguished when no longer required. The utmost care must be exercised at all times to avoid setting fire to the timber and grass.

5. Hunting or killing, wounding or capturing any bird or wild animal on the park lands, except dangerous animals when necessary to prevent them from destroying life or inflicting an injury, is prohibited. The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing such birds or wild animals, or in pos-

session of game killed on the park lands under other circumstances than prescribed above, will be taken up by the superintendent and held subject to the order of the Secretary of the Interior, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation and the actual owner thereof was not a party to such violation. Firearms will only be permitted in the park on written permission from the superintendent thereof.

6. Fishing in any other way than with hook and line is forbidden, and may be prohibited by order of the superintendent in any of the waters of the park, or limited therein to any specified season of the year, until otherwise ordered by the Secretary of the Interior. Fishing for purposes of merchandise or profit is forbidden. All fish less than 8 inches in length should at once be returned to the water with the least damage possible to the fish. Fish that are to be retained must be at once killed by a blow on the back of the head or by thrusting a knife or other sharp instrument into the head.

7. No person will be permitted to reside permanently, engage in any business, or erect buildings, etc., upon the Government lands in the park, without permission, in writing, from the Secretary of the Interior. The superintendent may grant authority to competent persons to act as guides and revoke the same in his discretion. No pack trains will be allowed in the park unless in charge of a duly registered guide.

8. Owners of patented lands within the park limits are entitled to the full use and enjoyment thereof; the boundaries of such lands, however, must be determined, and marked and defined, so that they may be readily distinguished from the park lands. While no limitations or conditions are imposed upon the use of such private lands so long as such use does not interfere with or injure the park, private owners must provide against trespass by their stock or cattle, or otherwise, upon the park lands, and all trespasses committed will be punished to the full extent of the law. Stock may be taken over the park lands to patented private lands with the written permission and under the supervision of the superintendent, but such permission and supervision are not required when access to such private lands is had wholly over roads or lands not owned or controlled by the United States.

9. Allowing the running at large, herding, or grazing of cattle or stock of any kind on the Government lands in the park, as well as the driving of such stock or cattle over same, is strictly forbidden, except where authority therefor has been granted by the superintendent. All cattle or stock found trespassing on the park lands will be impounded and disposed of as directed in regulations approved March 30, 1912.

10. No drinking saloon or barroom will be permitted upon Government lands in the park.

11. Private notices or advertisements shall not be posted or displayed on the Government lands within the reservation, except such as may be necessary for the convenience and guidance of the public.

12. Persons who render themselves obnoxious by disorderly conduct or bad behavior, or who violate any of the foregoing rules, will be summarily removed from the park and will not be allowed to re-

turn without permission, in writing, from the Secretary of the Interior or the superintendent of the park.

No lessee or licensee shall retain in his employ any person whose presence in the park shall be deemed and declared by the superintendent to be subversive of the good order and management of the reservation.

13. Any person who violates any of the foregoing regulations will be deemed guilty of a misdemeanor and, upon conviction, be fined not more than \$1,000, or be imprisoned not more than 12 months, or both, in the discretion of the court, as provided by the act creating the park.

14. The superintendent designated by the Secretary is hereby authorized and directed to remove all trespassers from the Government lands in the park and enforce these rules and regulations and all the provisions of the act of Congress aforesaid.

REGULATIONS OF MARCH 30, 1912, GOVERNING THE IMPOUNDING AND DISPOSITION OF LOOSE LIVE STOCK.

Horses, cattle, or other domestic live stock running at large or being herded or grazed on Government lands in the Wind Cave National Park without authority therefor, will be taken up and impounded by the superintendent, who will at once give notice thereof to the owner, if known. If the owner is not known, notice of such impounding, giving a description of the animal or animals, with the brands thereon, will be posted in six public places inside the park and in two public places outside the park. Any owner of an animal thus impounded may, at any time before the sale thereof, reclaim the same upon proving ownership and paying the cost of notice and all expenses incident to the taking up and detention of such animal, including the cost of feeding and caring for the same. If any animal thus impounded shall not be reclaimed within 30 days from notice to the owner or from the date of posting notices, it shall be sold at public auction at such time and place as may be fixed by the superintendent after 10 days' notice, to be given by posting notices in six public places in the park and two public places outside the park, and by mailing to the owner, if known, a copy thereof.

All money received from the sale of such animals and remaining after the payment of all expenses incident to the taking up, impounding, and selling thereof, shall be carefully retained by the superintendent in a separate fund for a period of six months, during which time the net proceeds from the sale of any animal may be claimed by and paid to the owner upon the presentation of satisfactory proof of ownership, and if not so claimed within six months from the date of sale such proceeds shall be turned into the Wind Cave National Park fund.

The superintendent shall keep a record in which shall be set down a description of all animals impounded, giving the brands found on them, the date and locality of the taking up, the date of all notices and manner in which they were given, the date of sale, the name and address of the purchaser, the amount for which each animal was sold and the cost incurred in connection therewith, and the disposition of the proceeds.

The superintendent will, in each instance, make every reasonable effort to ascertain the owner of animals impounded and to give actual notice thereof to such owner.

SULLY'S HILL PARK

This reservation, set aside by Executive proclamation dated June 2, 1904, under the act approved April 27, 1904 (33 Stat., 319), con-

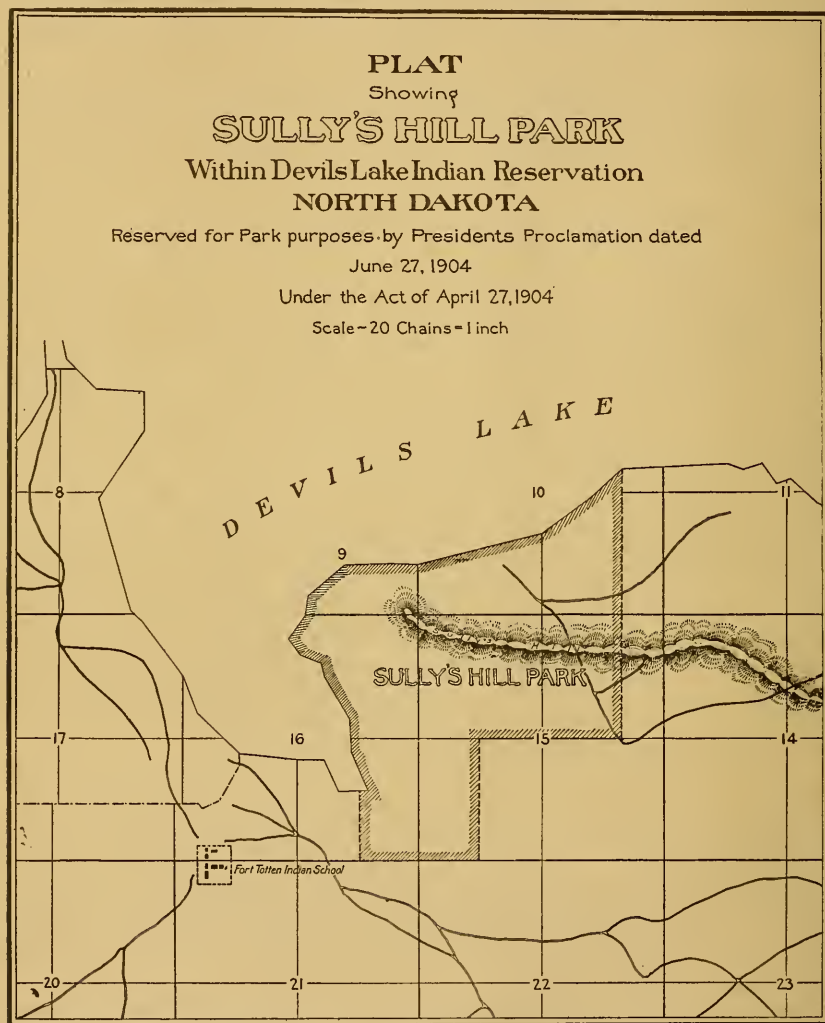


FIG. 1.—Map of Sully's Hill Park.

tains about 780 acres. It is located on the south shore of Devils Lake, N. Dak., having about 2 miles of shore line, with its western boundary 1 mile east of the Fort Totten Indian School. Inasmuch as no appropriation has been made for the care and protection of this

reservation, Mr. Charles M. Ziebach, in charge of the Indian industrial school (Fort Totten), has been continued as acting superintendent, and required to exercise the necessary supervision and control over the same until appropriation is made therefor by Congress.

The tract is well wooded and has an ample supply of water and many rugged hills, among which, on the western boundary, lies what is known as Sullys Hill. In the southwestern part is a small body of water known as Sweet Water Lake, west of which the surface is generally level and the soil good. The acting superintendent in his report for 1911 states:

The park is practically in the same condition as when I assumed charge of same in 1906, excepting that the continuous rains during the past season have placed the roads in nearly an impassable condition. On account of the road conditions very few persons visited the park during the past season and not to exceed 25 camped within the park boundaries for three days or more. A large number of people from Devils Lake and the surrounding country visited the park for a few hours, landing on Sullys Beach in rowboats, the trips being made by launch from the Chautauqua grounds. No stock was transported through the reservation. As no appropriation has ever been made for this park, no buildings constructed or improvements made of any kind, the park is looked upon as merely a deserted bit of wilderness and no interest will be taken until an appropriation is available and improvements made and roads built to enable the public to visit the park. Sullys Hill Park can not even boast of having an American flag within its borders, and this fact alone has a tendency to show a lack of interest by residents of the State at large.

If this park is to be continued under the supervision of the Secretary of the Interior, it is desirable that funds be provided for its protection and improvement, and an estimate in the sum of \$2,500 has accordingly been submitted to Congress for such purpose.

CASA GRANDE RUIN.

This reservation is located near Florence, Ariz., about 18 miles northeast of Casa Grande station, on the Southern Pacific Railroad, and contains about 480 acres. It was set aside by Executive order dated June 22, 1892, under the act approved March 2, 1889 (25 Stat., 961). By presidential proclamation of December 10, 1909, the boundaries of the reservation were changed by the elimination of 120 acres on which there were no prehistoric ruins and the inclusion of a tract of 120 acres adjoining the reservation on the east, on which are located important mounds of historic and scientific interest.

Casa Grande is an Indian ruin of undetermined antiquity, which was discovered in 1694 by Padre Kino, a Jesuit missionary. This great house is said to be the most important ruin of its type in the Southwest, and as such it has strong claims for archaeological study, repair, and permanent preservation. It is built of puddled clay molded into walls and dried in the sun, and is of perishable character. The main building was originally five or six stories high and covered a space 59 feet by 43 feet 3 inches. The walls have been gradually disintegrating, owing to the action of the elements. A corrugated iron roof has heretofore been erected over this building to protect it, so far as practicable, from further decay.

Surrounding Casa Grande proper is a rectangular walled inclosure or "compound," having an area of about 2 acres. In this inclosure, which has been called Compound A, excavations conducted under the Bureau of American Ethnology have resulted in the uncovering of a number of buildings or clusters of rooms, and others are known

to exist, but have not been excavated. Two other compounds were discovered and designated, respectively, Compound B and Compound C, but the latter has not been excavated, and is still in the form of a mound. These three compounds together constitute what is known as the Casa Grande group of ruins. As a result of this work, conducted under the Bureau of American Ethnology, the points of interest to visitors have been materially augmented. The ground plan of the ruin was increased by some 58 rooms, a number of plazas and surrounding walls, making the total number of rooms now open on the ground floor 100.

Reservation boundary

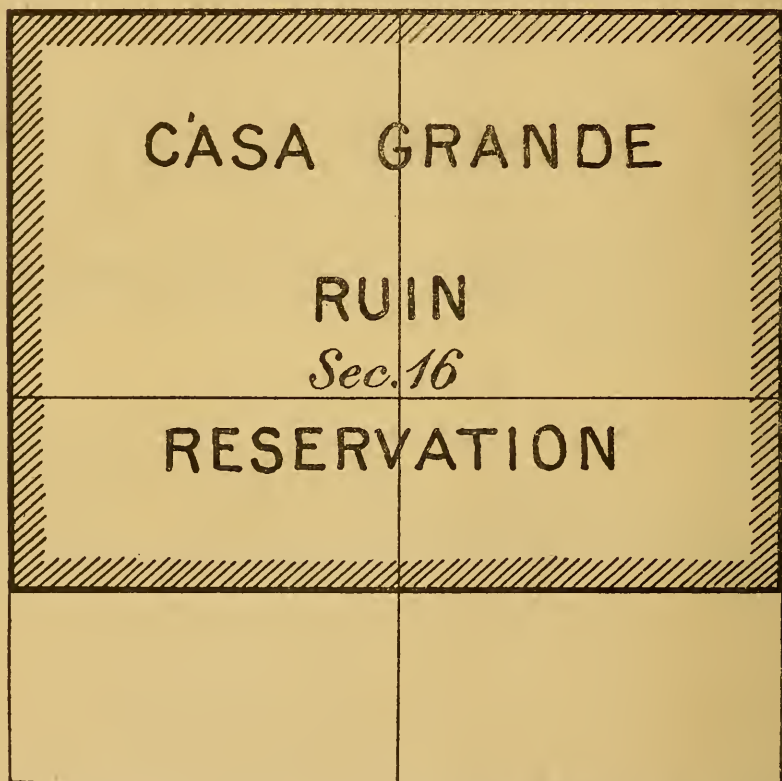


FIG. 2.—Casa Grande Ruin Reservation, Ariz., embracing the NW. $\frac{1}{4}$, the NE. $\frac{1}{4}$, the N. $\frac{1}{2}$ of the SW. $\frac{1}{4}$, and the N. $\frac{1}{2}$ of the SE. $\frac{1}{4}$ of sec. 16, T. 5 S., R. 8 E., Gila and Salt River meridian; set aside by executive order of June 22, 1892, under act of March 2, 1889.

Mr. Frank Pinkley, the custodian, who resides on the reservation, reports that the number of visitors during the year was fully up to the average and the usual interest seems to be shown by persons from the various parts of the United States in the ruin. He calls attention to the need of literature in relation to the ruin for distribution among visitors as a means of greatly increasing the interest of the public in the reservation, and recommends that provision be made for painting the roof and supports which protect the ruin, for

repairing the well, and for the supplying of suitable mechanical means for lifting water therefrom for the convenience of visitors, estimating the cost of these improvements at \$300.

NATIONAL MONUMENTS AND PRESERVATION OF AMERICAN ANTIQUITIES.

GENERAL STATEMENT.

By an act approved June 8, 1906, entitled "An act for the preservation of American antiquities," the President of the United States is authorized, "in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments." Under such authority the President has created the following monuments:

National monuments administered by Interior Department.

Name.	State.	Date.	Area.
			<i>Acres.</i>
Devils Tower.....	Wyoming.....	Sept. 24, 1906	1, 152
Montezuma Castle.....	Arizona.....	Dec. 8, 1906	160
El Morro.....	New Mexico.....	.....do.....	160
Chaco Canyon.....	do.....	Mar. 11, 1907	120, 629
Muir Woods ²	California.....	Jan. 9, 1908	295
Pinnacles.....	do.....	Jan. 16, 1908	2, 080
Tumacacori.....	Arizona.....	Sept. 15, 1908	10
Mukuntuweap.....	Utah.....	July 31, 1909	1 15, 840
Shoshone Cavern.....	Wyoming.....	Sept. 21, 1909	210
Natural bridges ³	Utah.....	Sept. 25, 1909	1 2, 740
Gran Quivira.....	New Mexico.....	Nov. 1, 1909	1 160
Sitka.....	Alaska.....	Mar. 23, 1910	1 57
Rainbow Bridge ⁴	Utah.....	May 30, 1910	160
Lewis and Clark Cavern.....	Montana.....	May 16, 1911	160
Colorado.....	Colorado.....	May 24, 1911	13, 883
Petrified forest.....	Arizona.....	July 31, 1911	25, 625
Navajo ⁵	do.....	Mar. 14, 1912	2 360

¹ Estimated area.

² Donated to the United States.

³ Originally set aside by proclamation of Apr. 16, 1908, and contained only 120 acres.

⁴ Within an Indian reservation.

⁵ Based on 15 known ruins with a reserved area of 40 acres surrounding each ruin. Exterior limits of tract specified in proclamation contain 918,310 acres.

The following regulations for the protection of national monuments were promulgated on November 19, 1910:

1. Fires are absolutely prohibited.
2. No firearms are allowed.
3. No fishing permitted.
4. Flowers, ferns, or shrubs must not be picked, nor may any damage be done to the trees.
5. Vehicles and horses may be left only at the places designated for this purpose.
6. Lunches may be eaten only at the spots marked out for such use, and all refuse and litter must be placed in the receptacles provided.
7. Pollution of the water in any manner is prohibited; it must be kept clean enough for drinking purposes.
8. No drinking saloon or barroom will be permitted.

9. Persons rendering themselves obnoxious by disorderly conduct or bad behavior, or who may violate any of the foregoing rules, will be summarily removed.

Names and addresses of officers having supervision of national monuments.

- F. C. Dezendorf, new customhouse building, San Francisco, Cal. :
 Muir Woods National Monument, Cal.
 Pinnacles National Monument, Cal.
 Gratz W. Helm, Federal building, Los Angeles, Cal. :
 Montezuma Castle National Monument, Ariz.
 Petrified Forest National Monument, Ariz.
 Tumacacori National Monument, Ariz.
 Navajo National Monument, Ariz.
 George E. Hair, Federal building, Salt Lake City, Utah :
 Mukuntuweap National Monument, Utah.
 Natural Bridges National Monument, Utah.
 Rainbow Bridge National Monument, Utah.
 Leroy O. Moore, Santa Fe, N. Mex. :
 El Morro National Monument, N. Mex.
 Chaco Canyon National Monument, N. Mex.
 Gran Quivira National Monument, N. Mex.
 Ira Lantz, Helena, Mont., Lewis and Clark Cavern National Monument, Mont.
 Adelbert Baker, Cheyenne, Wyo. :
 Devils Tower National Monument, Wyo.
 Shoshone Cavern National Monument, Wyo.
 A. Christensen, special agent in charge field service, Alaska (219 Federal building, Seattle, Wash.), Sitka National Monument, Alaska.

The Navajo National Monument as originally created by proclamation of March 20, 1909, embraced approximately 600 acres within the Navajo Indian Reservation, which was reserved tentatively and with a view to reduction to such small tract or tracts as might thereafter be found to contain valuable prehistoric pueblo or cliff dwellings, when the extent of the same could be determined by an examination on the ground and their locus definitely fixed by traverse lines connecting them with some corner of the public survey. Both of these conditions having been fulfilled, the monument was reduced by proclamation dated March 14, 1912, to three small tracts aggregating 360 acres. Within two of these tracts are located, respectively, two interesting and extensive pueblo or cliff-dwelling ruins in a good state of preservation and known as "Betata Kin" and "Keet Seel," and a third cliff-dwelling ruin called "Inscription House," located on Navajo Creek. "Inscription House" is regarded as extraordinary, not only because of its good state of preservation but because of the fact that upon the walls of its rooms were found inscriptions written in Spanish by early explorers and plainly dated 1661.

The Mount Olympus (Wash.) National Monument was set aside by proclamation dated March 2, 1909, and contains approximately 608,640 acres. It was reduced by proclamation dated April 17, 1912, to 608,480 acres, in order to permit certain claimants to land therein to secure title to the land.

The supervision of these various monuments has, in the absence of any specific appropriation for their protection and improvement, necessarily been intrusted to the field officers of the department having charge of the territory in which the several monuments are located. This supervision in many instances is necessarily limited, and considerable difficulty has been experienced in protecting the monuments from vandalism, unauthorized exploration, and spolia-

tion. An estimate for an appropriation of \$5,000 has been submitted to Congress for the protection and improvement of these reservations. Only such monuments as in the judgment of the Secretary of the Interior are subject to depredations by vandals and unauthorized collectors should be provided with a custodian or superintendent and then only when such danger really exists. In this way a small general appropriation can be made available and adequate for the whole field.

National monuments administered by the Department of Agriculture.

Name.	State.	Date.	Area.
			<i>Acres.</i>
Cinder Cone.....	California.....	May 6, 1907	15,120
Lassen Peak.....	do.....	do.....	11,280
Gila Cliff dwellings.....	New Mexico.....	Nov. 16, 1907	160
Tonto.....	Arizona.....	Dec. 19, 1907	1640
Grand Canyon.....	do.....	Jan. 11, 1908	1806,400
Jewel Cave.....	South Dakota.....	Feb. 7, 1908	11,280
Wheeler.....	Colorado.....	Dec. 7, 1908	300
Oregon Caves.....	Oregon.....	July 12, 1909	480
Devil's Postpile.....	California.....	July 6, 1911	800
Mount Olympus.....	Washington.....	Apr. 17, 1912	1608,480

¹ Estimated area.

National monument administered by the War Department.

Name.	State.	Date.	Area.
			<i>Acres.</i>
Big Hole Battle Field.....	Montana.....	June 23, 1910 ¹	5

¹ Set aside by Executive order.

The uniform rules and regulations promulgated by the Secretaries of the Interior, Agriculture, and War, under date of December 28, 1906, to carry into effect the general provisions of the act for the preservation of American antiquities provides (par. 3) that—

Permits for the excavations of ruins, the excavation of archeological sites, and the gathering of objects of antiquity will be granted, by the respective Secretaries having jurisdiction, to reputable museums, universities, colleges, or other recognized scientific or educational institutions, or to their duly authorized agents.

On June 26, 1912, a permit was granted by the department to Prof. Byron Cummings, of the University of Utah, to make examinations and excavations within the Navajo National Monument, and in the Navajo and Pahute Indian Reservations, as well as on lands 30 miles northwest of Bluff, Utah. A number of the largest archeological institutions in the country have claimed that the uniform regulations of December 28, 1906, should be amended so as to remove certain restrictions which they regard as oppressive. This matter is still under consideration in the department.

MUIR WOODS NATIONAL MONUMENT.

On December 31, 1907, the Secretary of the Interior, for and on behalf of the United States, accepted from William Kent and his

wife, Elizabeth Thatcher Kent, of Chicago, Ill., in accordance with the act of Congress approved June 8, 1906, entitled "An act for the preservation of American antiquities," a deed conveying to the United States the following-described land, situate in Marin County, Cal.:

Beginning at a stake, A. 7, driven in the center of the road in Redwood Cañon and located by the following courses and distances from the point of commencement of the tract of land, which was conveyed by the Tamalpais Land and Water Company to William Kent by a deed dated August 29th, 1905, and recorded in the office of the county recorder of Marin County, California, Book 95 of Deeds at page 58, to wit: North eighteen degrees thirty-two minutes, east two hundred thirty-two and sixty-four hundredths feet, north sixty-six degrees thirty minutes, west one hundred sixty-seven and thirty-four hundredths feet, north eighty-six degrees twenty-five minutes, west ninety-eight and sixty-two hundredths feet, north seventy degrees no minutes, west two hundred

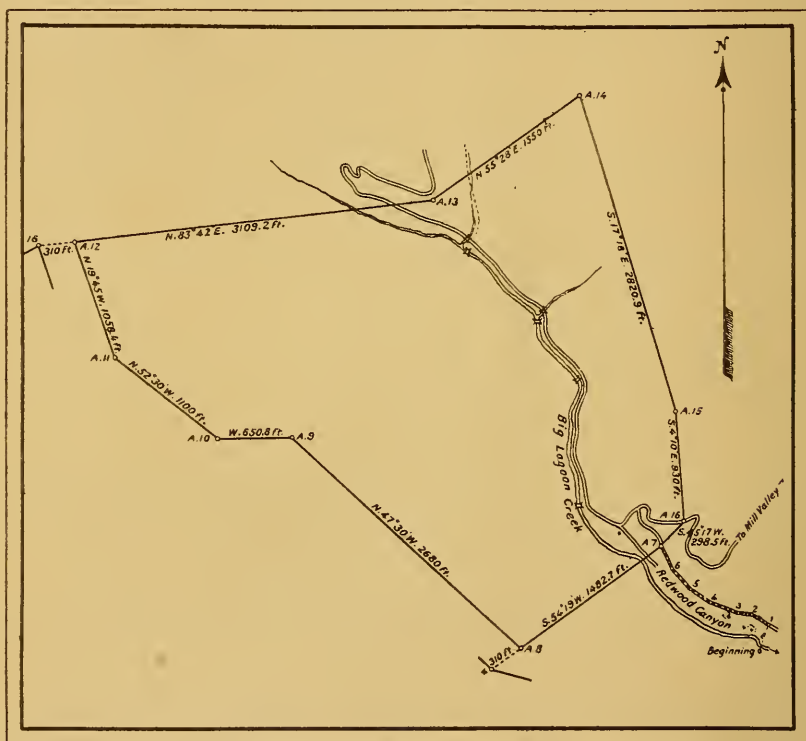


FIG. 3.—Muir Woods National Monument, Cal., in T. 1 N., R. 6 W., Mount Diablo meridian; created January 9, 1908.

forty-one and seven hundredths feet, north fifty-seven degrees twenty-nine minutes, west one hundred seventy-eight and three-hundredths feet, north forty-six degrees twenty-two minutes, west two hundred thirty-five and thirty-nine hundredths feet, and north twenty-four degrees twenty-five minutes, west two hundred twenty-five and fifty-six hundredths feet; thence from said stake, A. 7, the point of beginning, south fifty-four degrees nineteen minutes, west fourteen hundred eighty-two and seven-tenths feet to Station A. 8, from which Station A. 4 of the survey of the tract of land conveyed to William Kent as aforesaid bears south fifty-four degrees nineteen minutes, west three hundred ten feet distant; thence from said Station A. 8 north forty-seven degrees thirty minutes, west twenty-six hundred eighty feet; thence due west six hundred fifty and eight-tenths feet; thence north fifty-two degrees thirty minutes, west eleven hundred feet; thence north nineteen degrees forty-five minutes, west

ten hundred fifty-eight and four-tenths feet to Station A. 12 from which Station 16 of the survey of the tract of land conveyed to William Kent as aforesaid bears south eighty-three degrees forty-two minutes, west three hundred ten feet distant; thence north eighty-three degrees forty-two minutes, east thirty-one hundred nine and two-tenths feet; thence north fifty-five degrees twenty-eight minutes, east fifteen hundred fifty feet to an iron bolt, three-quarters of an inch in diameter and thirty inches long, Station 14; thence south seventeen degrees eighteen minutes, east twenty-eight hundred twenty and nine-tenths feet; thence south four degrees ten minutes, east nine hundred thirty feet to a stake, A. 16, driven in the center of a graded road; and thence south forty-five degrees seventeen minutes, west two hundred ninety-eight and five-tenths feet to said stake A. 7, the place of beginning. Containing an area of two hundred ninety-five acres, a little more or less.

On January 9, 1908, the President, by virtue of the power and authority vested in him by section 2 of said act, declared, proclaimed, and set apart the lands described as a "national monument to be known and recognized as Muir Woods National Monument." The Secretary of the Interior had, prior to the date last mentioned, withdrawn the lands from entry or sale.

On September 10, 1908, the department prescribed regulations as follows for the government and protection of said monument:

The following rules and regulations for the government of the Muir Woods National Monument, in the State of California, set aside under the provisions of the act of Congress approved June 8, 1906, are hereby established and made public, pursuant to the authority conferred by said act:

1. Fires are absolutely prohibited.
2. No firearms allowed.
3. No fishing permitted.
4. Flowers, ferns, or shrubs must not be picked, nor may any damage be done to the trees.
5. Vehicles and horses may be left only at the places designated for this purpose.
6. Lunches may be eaten only at the spots marked out for such use, and all refuse and litter must be placed in the receptacles provided.
7. Pollution of the water in any manner is prohibited. It must be kept clean enough for drinking purposes.
8. No drinking saloon or barroom will be permitted.
9. Persons rendering themselves obnoxious by disorderly conduct or bad behavior, or who may violate any of the foregoing rules, will be summarily removed.

While the sundry civil act approved May 27, 1908 (35 Stat., 317), was pending before Congress attention was called to the fact that no provision was made for the salaries of custodians or for other protection of national monuments, as recommended in the estimates for these services, and that the department would be embarrassed in its efforts to protect monuments from vandalism and unauthorized exploration and spoliation because of a lack of funds. The department had recommended an appropriation of \$5,000 for these purposes. Three thousand dollars had been appropriated the previous year, but because of defective wording of the act was not made available. However, on July 11, 1910, Andrew Lind, of California, was appointed custodian of the Muir Woods National Monument, at a salary of \$900 per annum, payable from the appropriation "Protection of public lands and timber."

These lands consist of one of the most noted redwood groves in the State of California, and were held in private ownership by Mr. Kent. The tract is of great scientific interest, contains many redwood trees which have grown to a height of 300 feet and have a diameter at the butt of 18 feet or more. It is located in a direct line about 7 miles

from San Francisco, Cal., and is in close proximity to a large and growing suburban population.

The report of Mr. Andrew Lind, the custodian of the reservation, for the year shows that the monument was carefully patrolled and the regulations for the government thereof enforced. Obstructions to the roads and trails in the shape of fallen trees have been removed, and the roads have been placed in condition for the accommodation of travel. About 40,000 people visited the monument during the year. Mr. Lind recommends that allotments be made for the renewing and cleaning out of the fire lines, that the main road running through the reservation be put in better condition, and that a suitable building be provided inside the monument for the use of the custodian.

During the year the sum of \$1,534.55 was expended in protection and improvement of the monument, and the custodian requests that \$2,600 be allotted for the protection and management of the monument during the next fiscal year.

PETRIFIED FOREST OF ARIZONA.

The Petrified Forest of Arizona lies in the area between the Little Colorado River and the Rio Puerco, 15 miles east of their junction and 6 miles south of Adamana, a station on the Santa Fe Pacific Railroad, from which place it is accessible by horse or vehicle. This area is of great interest because of the abundance of petrified coniferous trees, as well as its scenic features. The trees lie scattered about in great profusion; none, however, stands erect in its original place of growth, as do many of the petrified trees in the Yellowstone National Park. The trees probably at one time grew beside an inland sea; after falling they became waterlogged, and during decomposition the cell structure of the wood was entirely replaced by silica derived from sandstone in the surrounding land. Over a greater part of the entire area trees lie scattered in all conceivable positions and in fragments of all sizes. Perhaps the most prominent of all the scenic features of the region is the well-known Natural Bridge, consisting of a great petrified trunk lying across a canyon 45 feet in width and forming a footbridge over which anyone may easily pass.

Prof. Lester F. Ward, of the Geological Survey, has stated that "There is no other petrified forest in which the wood assumes so many varied and interesting forms and colors, and it is these that present the chief attraction for the general public. The state of mineralization in which much of this wood exists almost places them among the gems or precious stones. Not only are chalcedony, opals, and agates found among them, but many approach the condition of jasper and onyx. The degree of hardness attained by them is such that they are said to make an excellent quality of emery."

Dr. Walter Hough, of the Smithsonian Institution, who visited this monument, states that "In the celebrated Petrified Forest, which is some 18 miles from Holbrook, Ariz., on the picturesque Santa Fe Railroad, there are ruins of several ancient Indian villages. These villages are small, in some cases having merely a few houses, but what gives them a peculiar interest is that they were built of logs of beautiful fossil wood. * * * The prehistoric dwellers of the land selected cylinders of uniform size, which were seemingly deter-

mined by the carrying strength of a man. It is probable that prehistoric builders never chose more beautiful stones for the construction of their habitations than the trunks of the trees which flourished ages before man appeared on the earth.

"This wood agate also furnished material for stone hammers, arrowheads, and knives, which are often found in ruins hundreds of miles from the forest."

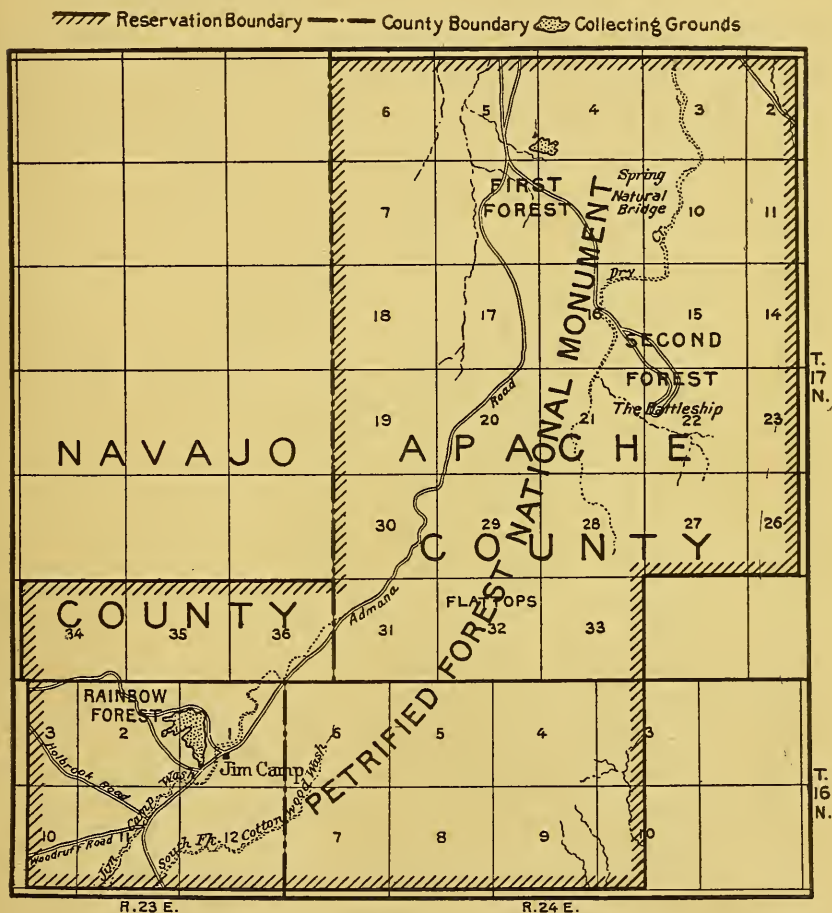


FIG. 4.—Petrified Forest National Monument, Ariz., embracing secs. 1, 2, 11, and 12 and E. $\frac{1}{2}$ secs. 3 and 10, T. 16 N., R. 23 E.; secs. 4 to 9 and W. $\frac{1}{2}$ secs. 3 and 10, T. 16 N., R. 24 E.; secs. 34, 35, 36, T. 17 N., R. 23 E.; secs. 3 to 10, 15 to 22, 27 to 33, and W. $\frac{1}{2}$ secs. 2, 11, 14, 23, 26, T. 17 N., R. 24 E., Gila and Salt River meridian, containing 40.04 square miles, set aside by proclamation of the President July 31, 1911.

NAVAJO NATIONAL MONUMENT.

This monument as originally created embraces a large area within the Navajo Indian Reservation, which was reserved tentatively and with a view to a reduction to such small tract or tracts as might be found to contain valuable prehistoric pueblo or cliff dwellings when

the extent of same could be determined by examination on the ground and their locus definitely fixed by traverse lines connecting them with some corner of the public surveys. Both of these conditions have now been fulfilled. By proclamation of March 14, 1912, the original reserve was reduced to three small tracts, embracing 360 acres, within which are located, respectively, two most interesting and extensive pueblo cliff-dwelling ruins in a remarkable state of preservation and known as the Betata Kin and Keet Seel, and a third cliff-dwelling

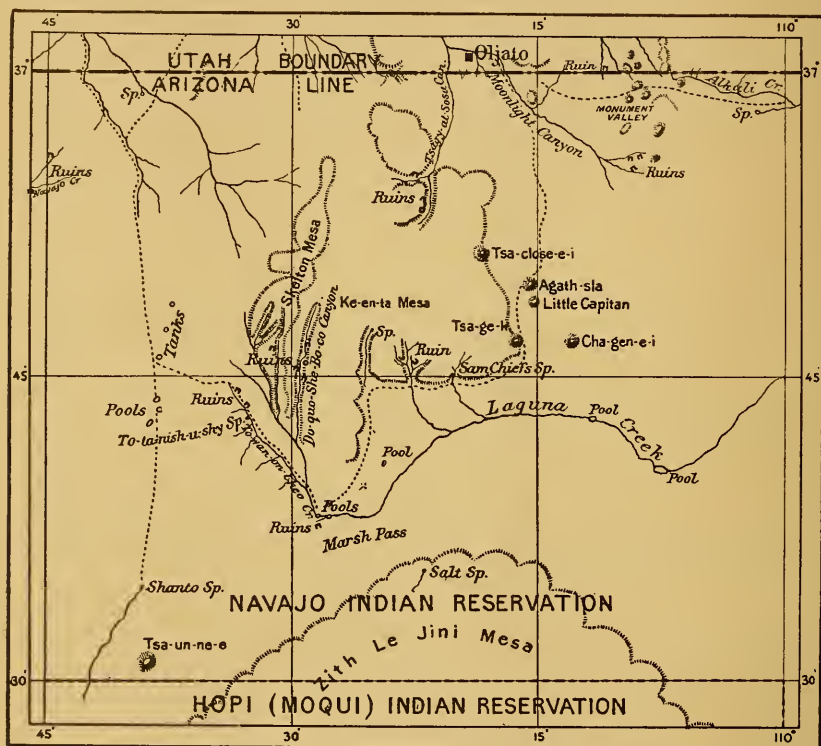


FIG. 5.—Navajo National Monument, Ariz., embracing all cliff-dwelling and pueblo ruins between the parallel of latitude $36^{\circ} 30'$ and 37° north and longitude 110° and $110^{\circ} 45'$ west from Greenwich, with 40 acres of land in square form around each of said ruins; created March 20, 1909.

ruin called Inscription House located on Navajo Creek just beyond the western boundary of the present monument and centrally located within and protected by a tract of land containing 40 acres. Inscription House is extraordinary not only because of its remarkable state of preservation, but because upon the walls of its well-preserved rooms were found inscriptions written in Spanish by early explorers and plainly dated 1661.

The new boundaries of the Navajo National Monument under the latter proclamation are shown in the preceding plat.

CHACO CANYON NATIONAL MONUMENT.

These remarkable relics of an unknown people embrace numerous communal or pueblo dwellings built of stone, among which is the ruin known as Pueblo Bonito, containing, as it originally stood, 1,200 rooms and being the largest prehistoric ruin yet discovered in the Southwest. Numerous other ruins, containing from fifty to a hundred or more rooms, are scattered along Chaco Canyon and tribu-

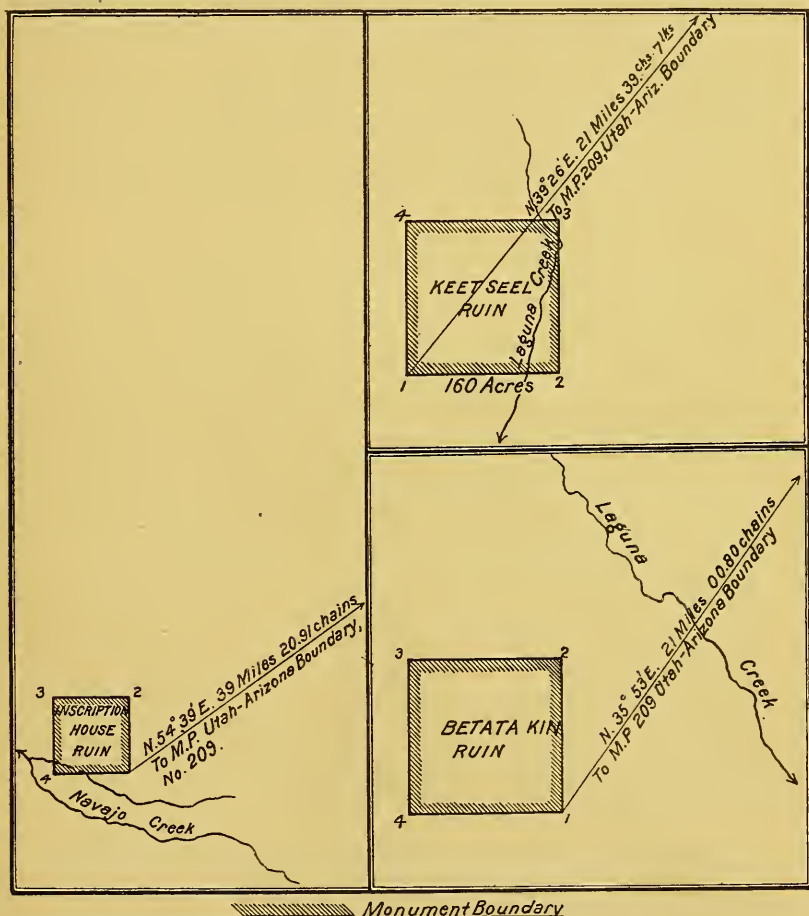


FIG. 6.—Navajo National Monument, Ariz., containing 360 acres, embracing the Keet Seel and Betata Kin ruins, located in two small tracts of 160 acres each, along Laguna Creek, and Inscription House ruins, on Navajo Creek, in a 40-acre tract, all within the Navajo Indian Reservation.

aries for a distance of about 14 miles and upon adjacent territory to the east, south, and west of Chaco Canyon many miles farther. The most important of these ruins are as follows: Pueblo Bonito, Chetro Kettle, Arroyo, New Alto, Old Alto, Kin-Klet Soi, Casa Chiquita, Penasco Blanco, Kin-Kla-tzin, Hungo Pavis, Unda Vidie, Weji-gi, Kim-me-ni-oli, Kin-yai, Casa Morena, and Pintado.

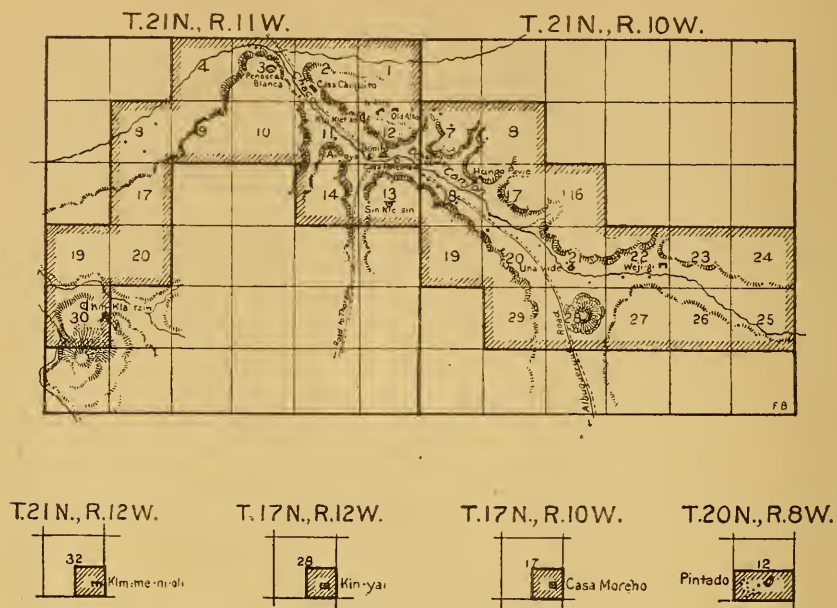
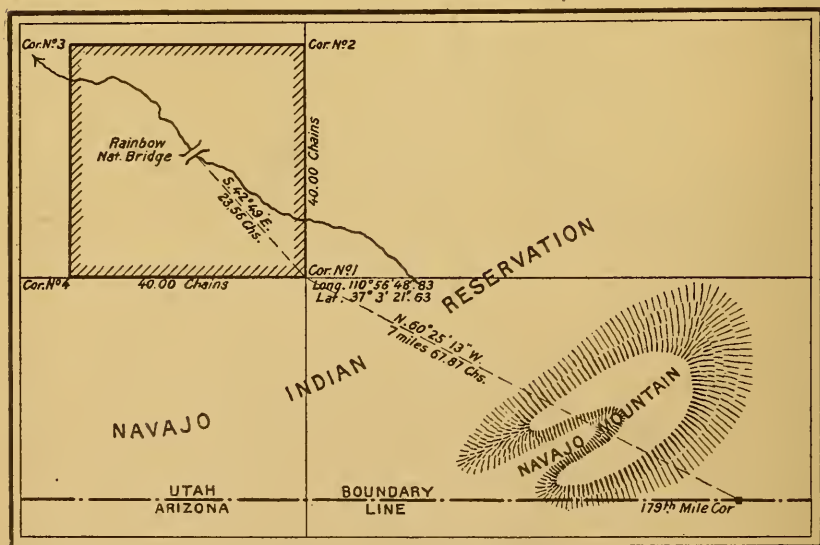


FIG. 7.—Chaco Canyon National Monument, N. Mex., embracing secs. 7 and 8 and 16 to 29, inclusive, T. 21 N., R. 10 W.; secs. 1, 2, 3, 4, and 8 to 14, inclusive, and 17, 19, 20, and 30, T. 21 N., R. 11 W.; S. $\frac{1}{4}$ sec. 12, T. 20 N., R. 8 W.; SE. $\frac{1}{4}$ sec. 32, T. 21 N., R. 12 W.; SE. $\frac{1}{4}$ sec. 28, T. 17 N., R. 12 W.; SE. $\frac{1}{4}$ sec. 17, T. 17 N., R. 10 W., New Mexico principal meridian; created March 11, 1907.



Monument Boundary

FIG. 8.—Rainbow Bridge National Monument, Utah, embracing 160 acres of land in square form, the southeast corner of which bears from one hundred and seventy-ninth mile corner on the Utah and Arizona boundary N. $60^{\circ}25'13''$ W. 7 miles 67.87 chains distant; created September 25, 1909.

RAINBOW BRIDGE NATIONAL MONUMENT.

This natural bridge is located within the Navajo Indian Reservation, near the southern boundary of Utah, a few miles northwest from Navajo Mountain, a well-known peak and landmark, and spans a canyon and small stream which drains the northwestern slopes of this peak. Among the known extraordinary natural bridges of the world, this bridge is unique in that it is not only a symmetrical arch below but presents also a curved surface above, thus presenting, roughly, the character of the rainbow, for which it is named. Its height above the surface of the water is 309 feet and its span is 278 feet.

The existence of this natural wonder was first disclosed to William B. Douglass, an examiner of surveys of the General Land Office, on August 14, 1909, by a Piute Indian, called "Mike's-boy," later "Jim," who was employed in connection with the survey of the natural bridges in White Canyon, Utah.

EL MORRO NATIONAL MONUMENT.

A feature of great historic interest and importance is the so-called El Morro or Inscription Rock, some 35 miles almost due east of Zuni Pueblo in western central New Mexico.

It is not too much to say that no rock formation in the West or perhaps in the world is so well adapted to the purpose for which this table of stone was used—at least history does not record any collection of similar data. Here are records covering two centuries, some of which are the only extant memoranda of the early expeditions and explorations of what is now the southwestern part of the United States. On these smooth walls, usually under some projecting stratum, inscriptions were cut by the early conquerors and explorers, which have made this rock one among the most interesting objects on the continent.

Here, in this remote and uninhabited region, in the shadows of one of nature's most unique obelisks, wrapped in the profound silence of the desert, with no living thing to break the stillness, it is hard to realize that 300 years ago these same walls echoed the clank of steel harness and coats of mail; that with the implements of Spanish conquest the pathfinders in the New World were carving historical records upon the eternal rock.

Locally Inscription Rock and El Morro are known as separate and distinct monumental rocks. The latter, translated The Castle, is the rock standing out in bold relief to the east, while Inscription Rock is the name applied to the formation to the west, which is a part of the mesa. On the south side in the angle formed by the two, one extending east and the other south, is a great chamber or cavern, a natural amphitheater where secure refuge from storm or human foe could easily be secured. It is here, too, that the only spring within many miles wells up as if to make the natural fortification doubly secure. Upon these walls are many of the best preserved Spanish inscriptions, although there are quite a number 200 feet east, under the shadows of a stately pine tree and on the north side of El Morro. Most of them are as plain and apparently as legible as the day they were written;

especially is this true of the older ones, carved during the sixteenth and seventeenth centuries.

The existence of extensive, prehistoric ruins on the very summit of Inscription Rock is another feature of interest. On the top of the rock a deep cleft or canyon divides the western end of the formation. On each of these arms is the remnant of large communal houses or pueblos. Some of the walls are yet standing and the ground plans of the structures are well defined. That on the south arm, and almost overhanging the cavern and spring, is approximately 200 by 150 feet. Some of the buildings must have been more than one story in height.



FIG. 9.—El Morro National Monument, N. Mex., embracing the S. $\frac{1}{2}$ NE. $\frac{1}{4}$ and N. $\frac{1}{2}$ SE. $\frac{1}{4}$ sec. 6, T. 9 N., R. 14 W., New Mexico meridian; created December 8, 1906.

The remarkable natural defenses of the site and the existence of the spring doubtless induced the builders to select this odd location. At some distant day it may be desirable to excavate these ruins and thus add to this historic spot attractions for the scientist as well as the general public who are interested in scenic and natural curiosities.

LEWIS AND CLARK CAVERN NATIONAL MONUMENT.

The feature of this monument is a limestone cavern of great scientific interest, because of its length and because of the number of large vaulted chambers it contains. It is of historic interest, also,

because it overlooks for a distance of more than 50 miles the trail of Lewis and Clark along the Jefferson River, named by them. The vaults of the cavern are magnificently decorated with stalactites and stalagmite formations of great variety in size, form, and color, the equal of, if not rivaling, the similar formations in the well-known Luray caves in Virginia.

The cavern is located about 1 mile northeasterly from Limespur, a post office in Jefferson County, and a station on the Northern Pacific

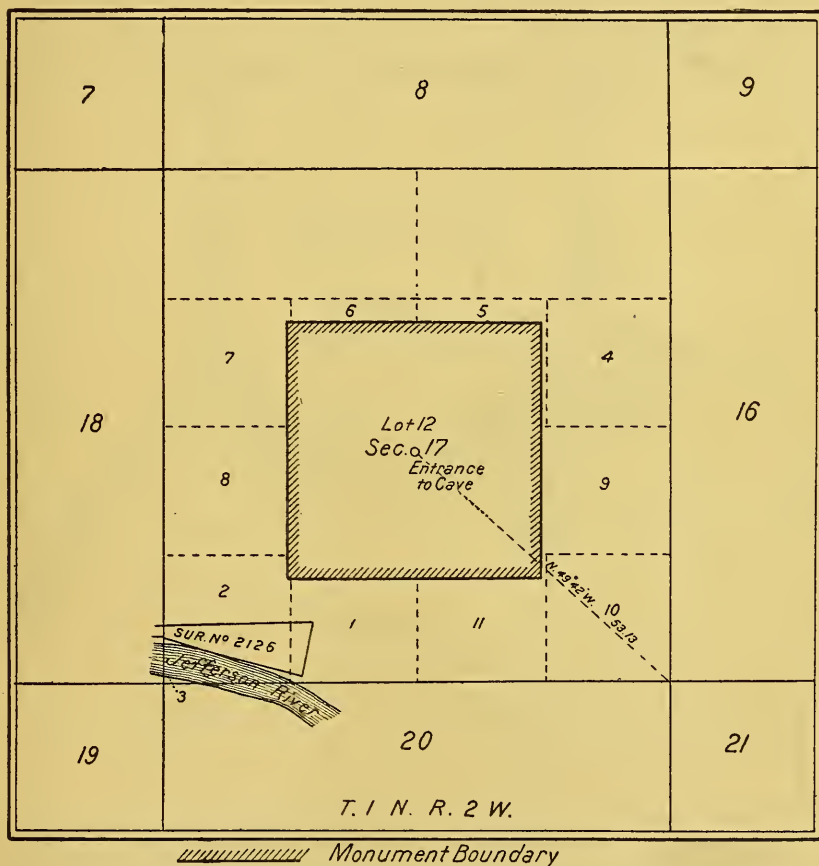


FIG. 10.—Lewis and Clark Cavern National Monument, Mont., embracing lot 12, sec. 17, T. 1 N., R. 2 W., Montana principal meridian; created May 11, 1908.

Railroad. Its two entrances, which are about 100 yards apart, are upon the walls of a deep canyon about 500 feet below the rim, and the cavern extends back therefrom approximately half a mile. The proclamation establishing this monument is as follows:

Whereas the unsurveyed tract of land containing an extraordinary limestone cavern and embracing one hundred and sixty acres, situated in township one north, range two west of the Montana principal meridian, Montana, and which was created the Lewis and Clark Cavern National Monument by proclamation dated the 11th day of May, 1908, has recently been definitely located by an official survey thereof, made under the direction of the Commissioner of the General Land Office, and such survey having determined that the tract in ques-

tion lies wholly within the limits of the grant of the Northern Pacific Railway Company but has not yet been patented to that company;

And whereas, by its quitclaim deed the said Northern Pacific Railway Company relinquished unto the United States all its right, title, and interest to lot twelve, section seventeen, township one north, range two west of the Montana principal meridian, Montana, the same being the original tract proclaimed a national monument, for the purpose of maintaining thereon the said Lewis and Clark Cavern National Monument, under the condition that the instrument of relinquishment shall become void and the premises immediately revert to the grantor should the monument no longer be maintained.

Now, therefore, I, William H. Taft, President of the United States of America, by virtue of the power in me vested by section two of the act of

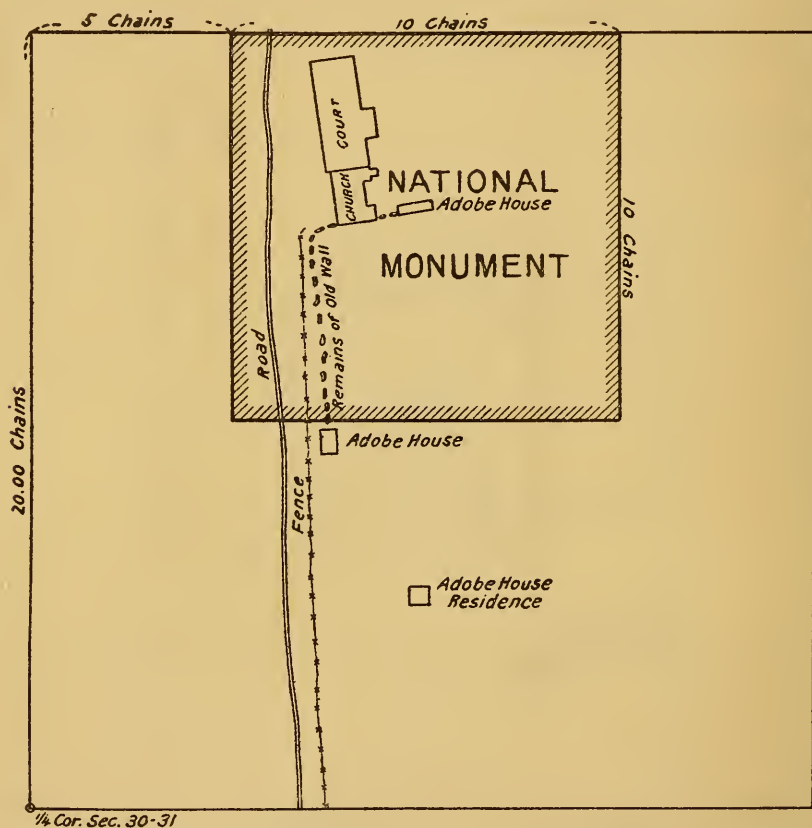


FIG. 11.—Tumacacori National Monument, Ariz., embracing the E. $\frac{1}{2}$ NW. $\frac{1}{4}$ SW. $\frac{1}{4}$ SE. $\frac{1}{2}$ and the W. $\frac{1}{2}$ NE. $\frac{1}{4}$ SW. $\frac{1}{4}$ SE. $\frac{1}{2}$, sec. 30, T. 21 S., R. 13 E., Gila and Salt River meridian; created September 15, 1908.

Congress approved June 8, 1906, entitled "An act for the preservation of American antiquities," do hereby set aside and confirm as the Lewis and Clark Cavern National Monument the said tract, embracing one hundred and sixty acres of land, at and surrounding the limestone cavern in section seventeen, township one north, range two west, Montana, subject to the conditions set forth in the relinquishment and quitclaim deed No. 18129E, dated February 14, 1911, of the Northern Pacific Railway Company, the said tract being in square form and designated as lot twelve in the survey and deed, with side lines running north and south and all sides equidistant from the main entrance of the said cavern, the center of said entrance bearing north forty-nine degrees, forty-two minutes west, fifty-three and thirteen hundredths chains distant from the corner to sections sixteen, seventeen, twenty, and twenty-one, as shown upon the diagram hereto attached and made a part hereof.

Warning is hereby expressly given to all persons not to appropriate, injure, or destroy any of the natural formations in the cavern hereby declared to be a national monument, nor to locate or settle upon any of the lands reserved and made a part of said monument by this proclamation.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this sixteenth day of May, in the year
[SEAL.] of our Lord one thousand nine hundred and eleven, and of the independence of the United States the one hundred and thirty-fifth.

TUMACACORI NATIONAL MONUMENT.

This monument embraces 10 acres of land relinquished to the United States by a homestead entryman for the purposes specified in the act of June 8, 1906. Upon the tract is located a very ancient



FIG. 12.—Montezuma Castle National Monument, Ariz., embracing the NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 16, the N. $\frac{1}{2}$ NE. $\frac{1}{4}$ and NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 17, T. 14 N., R. 5 E., Gila and Salt River meridian; created December 8, 1906.

Spanish mission ruin, erected probably, as appears from the reports, in the latter part of the sixteenth century. The church is in a remarkable state of preservation, owing to the fact that it was erected out of burned bricks and cement mortar.

MONTENZUMA CASTLE NATIONAL MONUMENT.

This structure is of very great interest, not only because of its picturesqueness, but for ethnological and other scientific reasons. It is strictly a cliff dwelling, with the added importance that it is also a communal house. Although very small as compared with the great

ruins of Chaco Canyon, Canyon de Chelley, Mesa Verde, the Mancos, and other localities of the Southwest, it is so unique in location and structural design, and so perfectly preserved, that it may be said to have no equal in the United States.

The character of the material used in the Verde cliff ruins, adobe, rubble, and a soft calcareous stone, rendered the progress of disintegration and ruin somewhat rapid, though many centuries must have elapsed since the passing of the race. The Mojave Apache Indians, who occupied the valley at the advent of the white men, have no tradition respecting the existence of the people who formerly

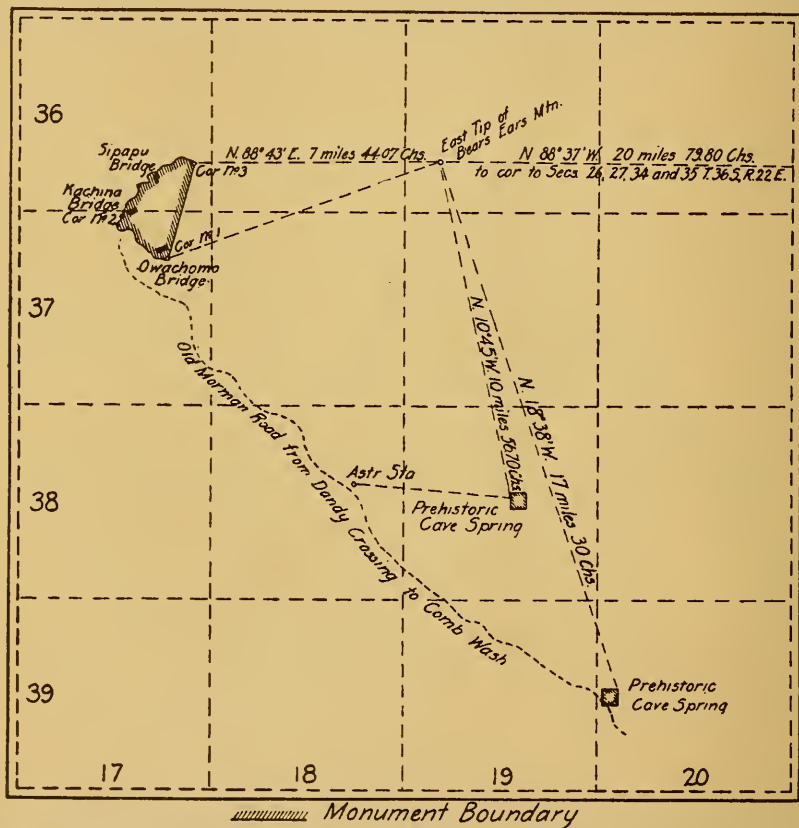


FIG. 13.—Natural Bridges National Monument, Utah, embracing a subtriangular tract in unsurveyed Tps. 36 and 37 S., R. 17 E., and two smaller tracts, one each in T. 38 S., R. 19 E., and T. 39 S., R. 20 E., Salt Lake meridian; created September 25, 1909.

occupied this region. Montezuma's Castle, it is stated, is the only single perfect specimen and type of the architectural skill of the prehistoric cliff dwellers of this valley.

NATURAL BRIDGES NATIONAL MONUMENT.

This tract of land was first created a national monument on April 16, 1908.

A second proclamation, issued by the President September 25, 1909, includes, besides the three bridges originally reserved, a much more

extended territory, but within which, along the walls of the canyons in the vicinity of the bridges, are found many prehistoric ruins of cavern and cliff dwellings. There are also two cavern springs containing some prehistoric ruins, which are located approximately 13 and 19 miles southeast of the bridges, respectively. These cavern springs are included within the Natural Bridges Monument. They are located upon the ancient and only trail to the bridges from the south, and are important way stations in the desert surrounding this monument.

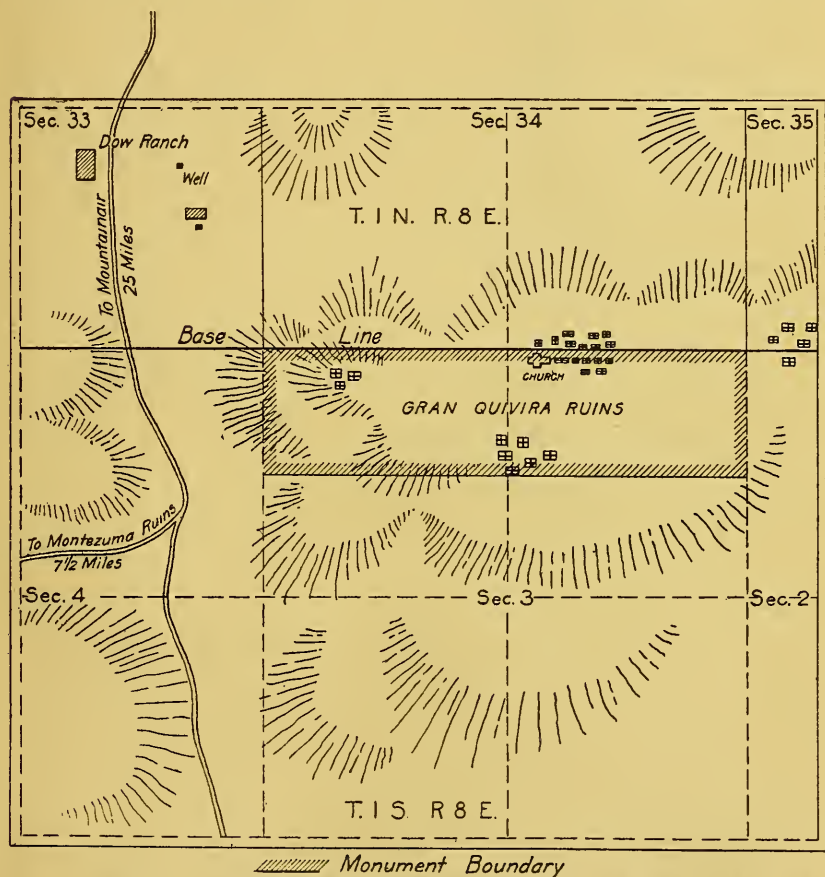


FIG. 14.—Gran Quivira National Monument, N. Mex., embracing unsurveyed N. $\frac{1}{4}$ N. $\frac{1}{4}$ sec. 3, T. 1 S., R. 8 E., New Mexico principal meridian: created November 1, 1909.

GRAN QUIVIRA NATIONAL MONUMENT.

The Gran Quivira has long been recognized as one of the most important of the earliest Spanish church or mission ruins in the Southwest. Near by are numerous Indian pueblo ruins, occupying an area many acres in extent, which also, with sufficient land to protect them, was reserved. The outside dimensions of the church ruins, which is in the form of a short-arm cross, are about 48 by 140 feet, and its walls are from 4 to 6 feet thick and from 12 to 20 feet high.

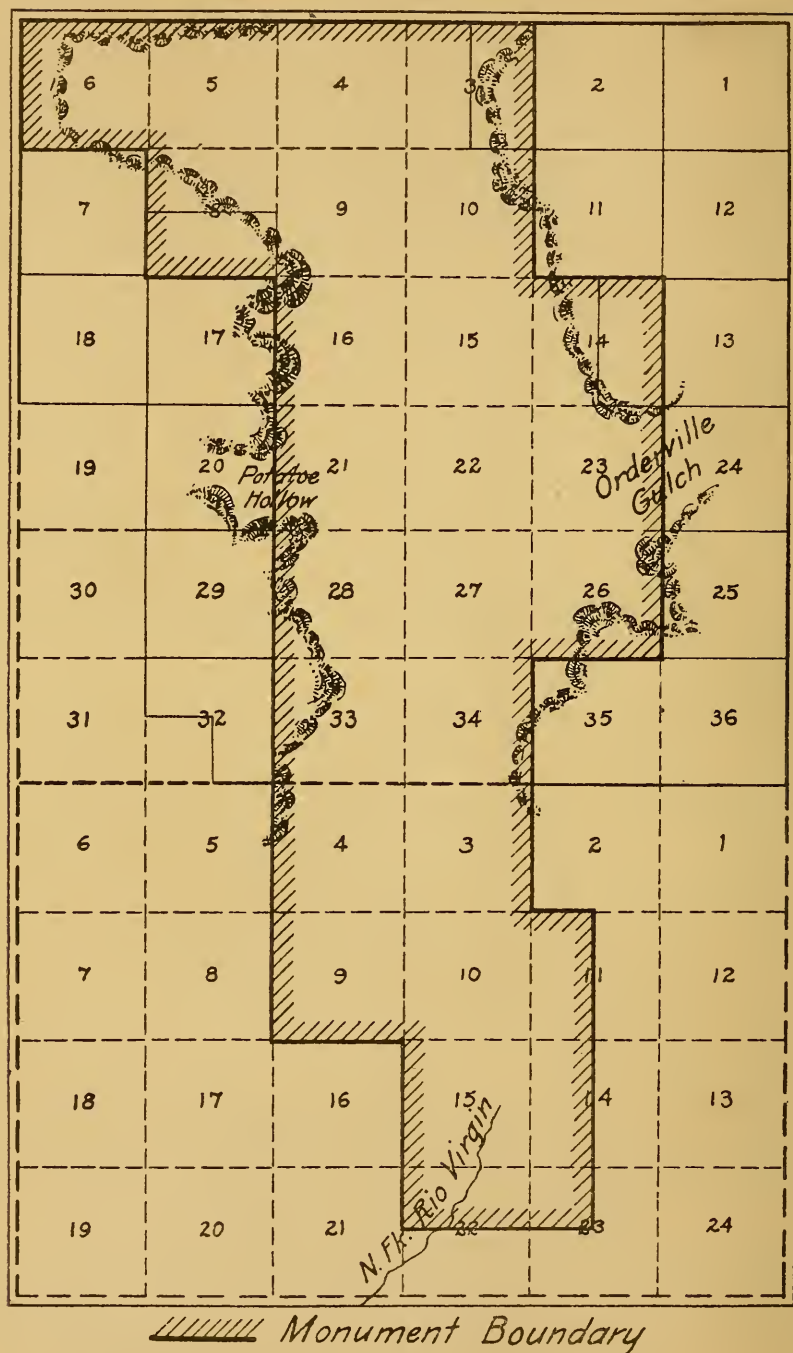


FIG. 15.—Mukuntuweap National Monument, Utah, embracing secs. 3, 4, 5, 6, 8, 9, 10, 14, 15, 16, 21, 22, 23, 26, 27, 28, 33, and 34, T. 40 S., R. 10 W., and all of the Mukuntuweap Canyon in T. 41 S., R. 10 W., Salt Lake meridian; created July 31, 1909.

The Gran Quivira National Monument is located $1\frac{1}{2}$ miles outside of the exterior boundaries of the Manzano National Forest, and is remote from the headquarters of any officer of this department.

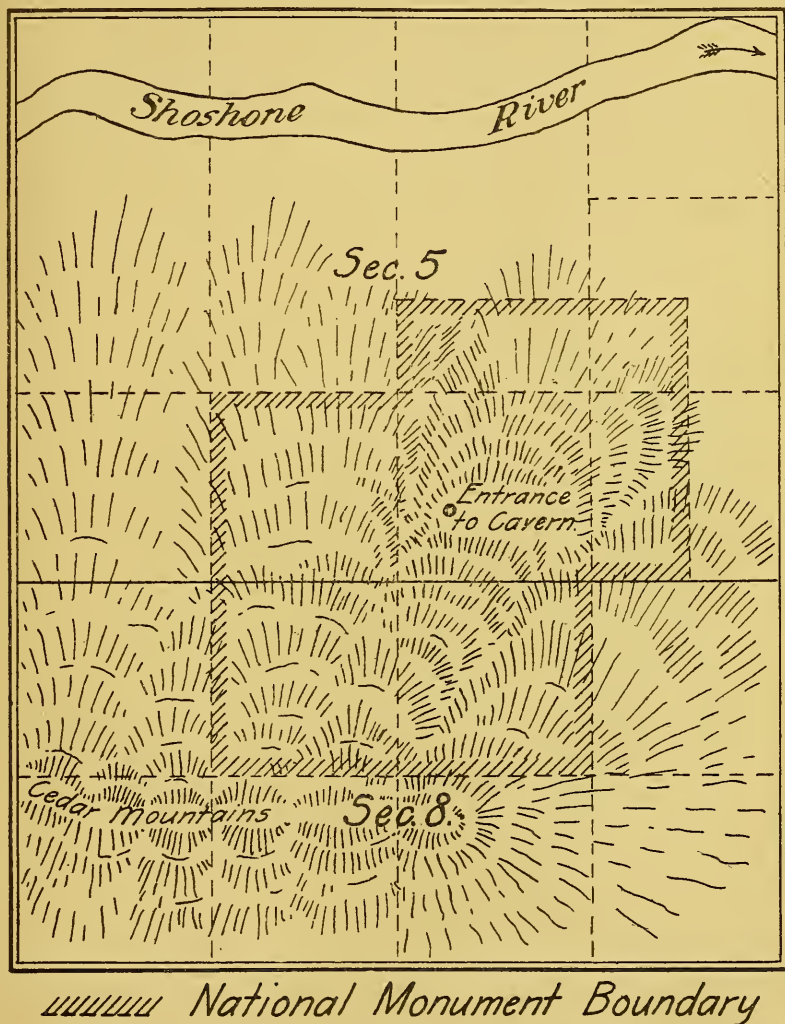


FIG. 16.—Shoshone Cavern National Monument, Wyo., embracing the SW. $\frac{1}{4}$ SE. $\frac{1}{4}$, W. $\frac{1}{2}$ SE. $\frac{1}{4}$ SE. $\frac{1}{4}$, SW. $\frac{1}{4}$ NE. $\frac{1}{4}$ SE. $\frac{1}{4}$, S. $\frac{1}{2}$ NW. $\frac{1}{4}$ SE. $\frac{1}{4}$; and SE. $\frac{1}{4}$ SW. $\frac{1}{4}$, sec. 5; the NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ and NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 8, T. 52 N., R. 102 W., sixth principal meridian; created September 21, 1909.

MUKUNTUWEAP NATIONAL MONUMENT.

The Mukuntuweap National Monument, Utah, embraces the magnificent gorge of Zion Creek, called the Mukuntuweap Canyon by the Powell Topographic Survey of southwestern Utah, Kanab sheet, and the same is of the greatest scientific interest. The canyon walls are

smooth, vertical sandstone precipices, from 800 to 2,000 feet deep. These walls are unscalable within the limits of the boundaries of the reserve, except at one point about 4 miles from the southern and 6 miles from the northern extremity. The North Fork of the Rio Virgin passes through the canyon, and it is stated that the views into the canyon from its rim are exceeded in beauty and grandeur only by the similar views into the Grand Canyon of the Colorado.

At intervals along the west wall of the canyon are watercourses which cross the rim and plunge into the gorge in waterfalls 800 to 2,000 feet high.



FIG. 17.—Sitka National Monument, Alaska, embracing a tract of land which includes the mouth of Indian River and adjacent territory near Sitka; created March 23, 1910.

SHOSHONE CAVERN NATIONAL MONUMENT.

The Shoshone Cavern National Monument embraces 210 acres of rough, mountainous land. The cavern entrance is located upon the north face of Cedar Mountain, about 3 miles east of the great Shoshone Dam in Big Horn County, Wyo. From its entrance the cavern runs in a southwesterly direction for more than 800 feet, if measured in a direct line. The route which must be traveled to reach this depth within the mountain, however, is so winding and irregular that at least a mile is passed before the terminus is reached.

There are en route many dark pits and precipices of unknown depth and therefore of a special interest. The various chambers and passages are beautifully decorated with a sparkling crust of limestone crystals and from the roof hang myriads of stalactites.

SITKA NATIONAL MONUMENT, ALASKA.

This monument reservation, created under the act of June 8, 1906, embraces about 57 acres of comparatively level gravel plain formed by sea wash and by the deposits of Indian River, which flows through the tract. Upon this ground was located formerly the village of a warlike tribe—the Kik-Siti Indians—who, in 1802, massacred the Russians in old Sitka and thereafter fortified themselves and de-

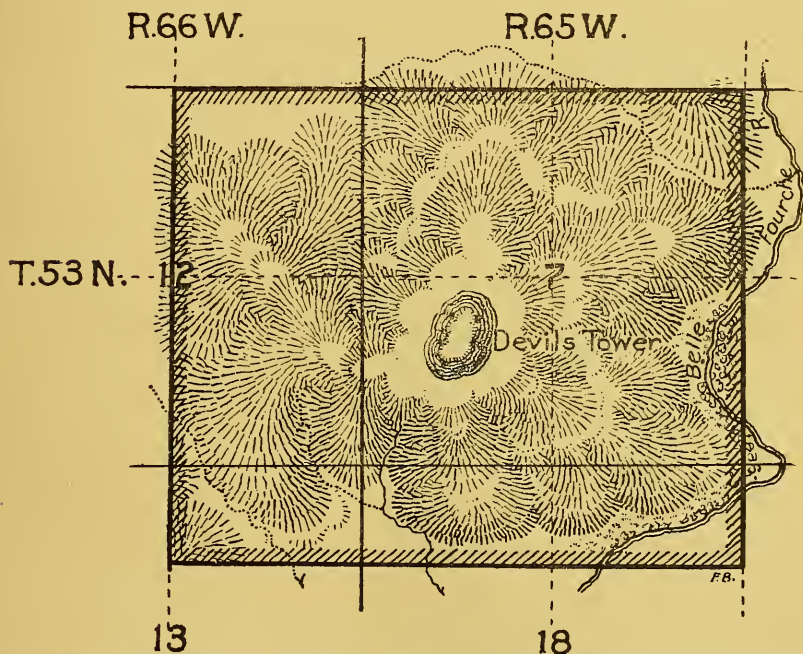


FIG. 18.—Devils Tower National Monument, Wyo., embracing sec. 7 and the N. $\frac{1}{2}$ NE. $\frac{1}{4}$, the NE. $\frac{1}{4}$ NW. $\frac{1}{4}$, and lot No. 1, sec. 18, T. 53 N., R. 65 W.; the E. $\frac{1}{2}$ sec. 12 and the N. $\frac{1}{2}$ NE. $\frac{1}{4}$ sec. 13, T. 53 N., R. 66 W., sixth principal meridian; created September 24, 1906.

fended their village against the Russians under Baranoff and Lisianski. Here also are the graves of a Russian midshipman and six sailors, who were killed in a decisive battle in 1804. A celebrated "witch tree" of the natives and 16 totem poles, several of which are examples of the best work of the savage genealogists of the Alaska clans, stand sentrylike along the beach.

DEVILS TOWER NATIONAL MONUMENT.

This extraordinary, natural monument has been known and utilized, doubtless, from time immemorial by the aborigines of the plains and mountains, for the American Indian of the last century was

found to be directing his course to and from the hunt and foray by reference to this lofty pile. In their turn the white pioneers of civilization in their explorations of the great Northwest which began with the expedition of the Verendryes, pathfinders of the French colonies of Canada, in 1742, utilized the tower as a landmark, and still later the military expeditions into the Sioux and Crow Indian country during the Indian wars of the last century carried on operations within sight of the Devils Tower or directed their march by the aid of its ever-present beacon, for the tower is visible in some directions in that practically cloudless region for nearly 100 miles.

PINNACLES NATIONAL MONUMENT.

There are two groups of the so-called Pinnacles Rocks, known locally as the Big Pinnacles and the Little Pinnacles. The general

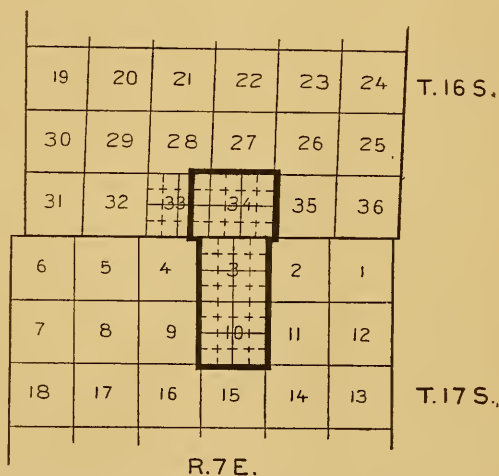


FIG. 19.—Pinnacles National Monument, Cal.; created January 16, 1908.

characteristics of the two groups are similar. Each covers an area of about 160 acres, very irregular in outline.

The name is derived from the spirelike formations rising from 600 to 1,000 feet from the floor of the canyon, forming a landmark visible many miles in every direction. Many of the rocks are so precipitous that they can not be scaled. A series of caves, opening one into the other, lie under each of the groups of rock. These caves vary greatly in size, one in particular, known as the Banquet Hall, being about 100 feet square with a ceiling 30 feet high. The caves are entered through narrow canyons, with perpendicular rock walls and overhanging boulders. One huge stone, called the Temple Rock, is almost cubical in form. It stands alone in the bottom of the canyon and its walls rise perpendicularly to a height of over 200 feet. There are also several specimens of "balancing rocks" in each of the groups.

COLORADO NATIONAL MONUMENT.

This area was set aside as a national monument by the President's proclamation of May 24, 1911, and is the latest monument to be created.

It is situated near Grand Junction, Colo., and the site is in a picturesque canyon, which has long been an attractive feature of that

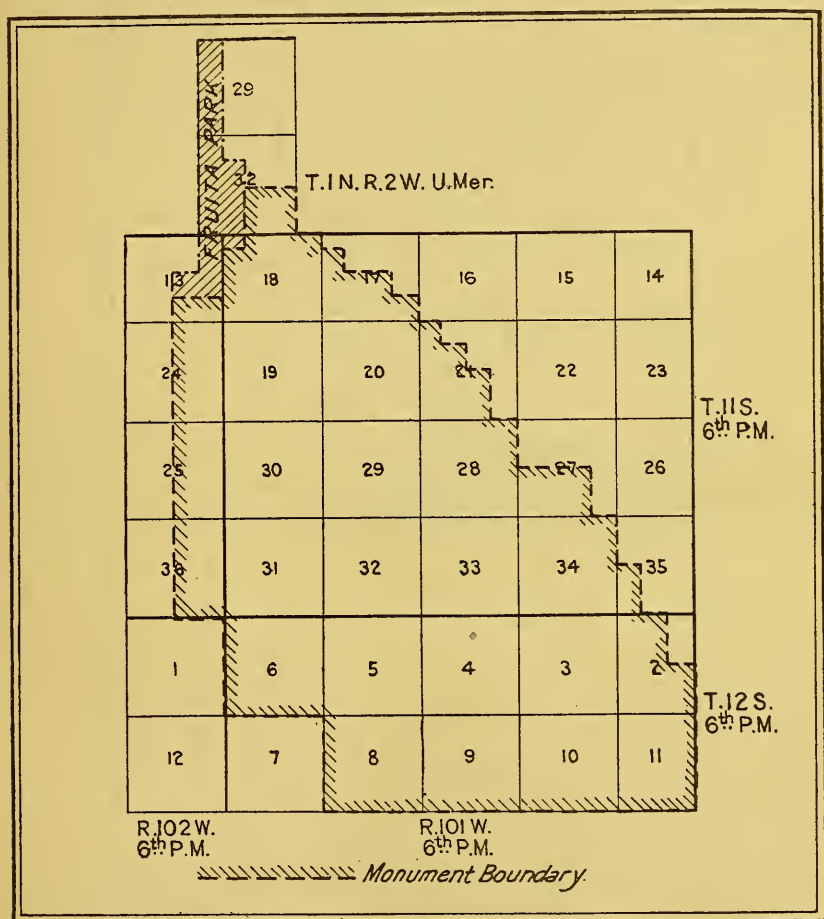


FIG. 20.—Colorado National Monument, Colo., embracing parts of Tps. 11 and 12 S., Rs. 101 and 102 W. of the sixth principal meridian, and part of sec. 32, T. 1 N., R. 2 W. of the Ute meridian, Colorado, containing 13,833.06 acres.

portion of the State. The formation is similar to that of the Garden of the Gods at Colorado Springs, Colo., only much more beautiful and picturesque. With the exception of the Grand Canyon of the Colorado it exhibits probably as highly colored, magnificent, and impressive examples of erosion, particularly of lofty monoliths, as may be found anywhere in the West. These monoliths are located in several tributary canyons. Some of them are of gigantic size,

one being over 400 feet high, almost circular in cross section, and 100 feet in diameter at base.

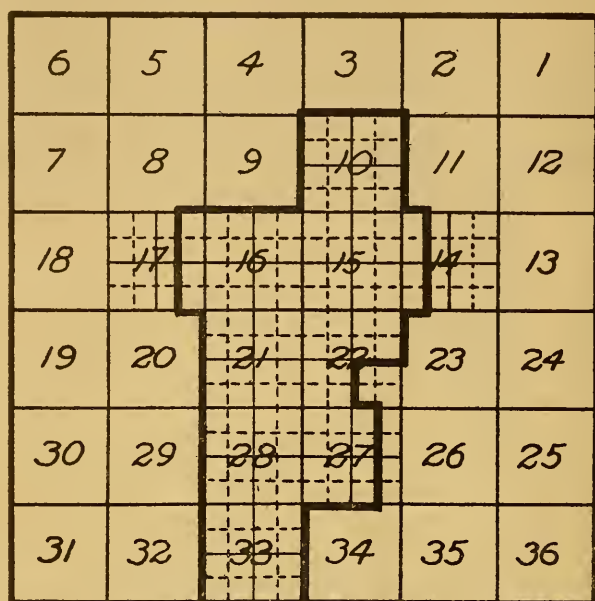


FIG. 21.—Cinder Cone National Monument, within Lassen Peak National Forest, Cal.



FIG. 22.—Lassen Peak National Monument, within Lassen Peak National Forest, Cal.

CINDER CONE NATIONAL MONUMENT.

The Cinder Cone National Monument was created by proclamation dated May 6, 1907. It is situated within the Lassen Peak National

Forest, and with the adjacent area, embracing a lava field and Snag Lake and Lake Bidwell, is of scientific interest as illustrative of volcanic activity, and is of special importance in tracing the history of the volcanic phenomena of that vicinity.

LASSEN PEAK NATIONAL MONUMENT.

The Lassen Peak National Monument was created by proclamation dated May 6, 1907. It is situated within the Lassen Peak National Forest and marks the southern terminus of the long line of extinct

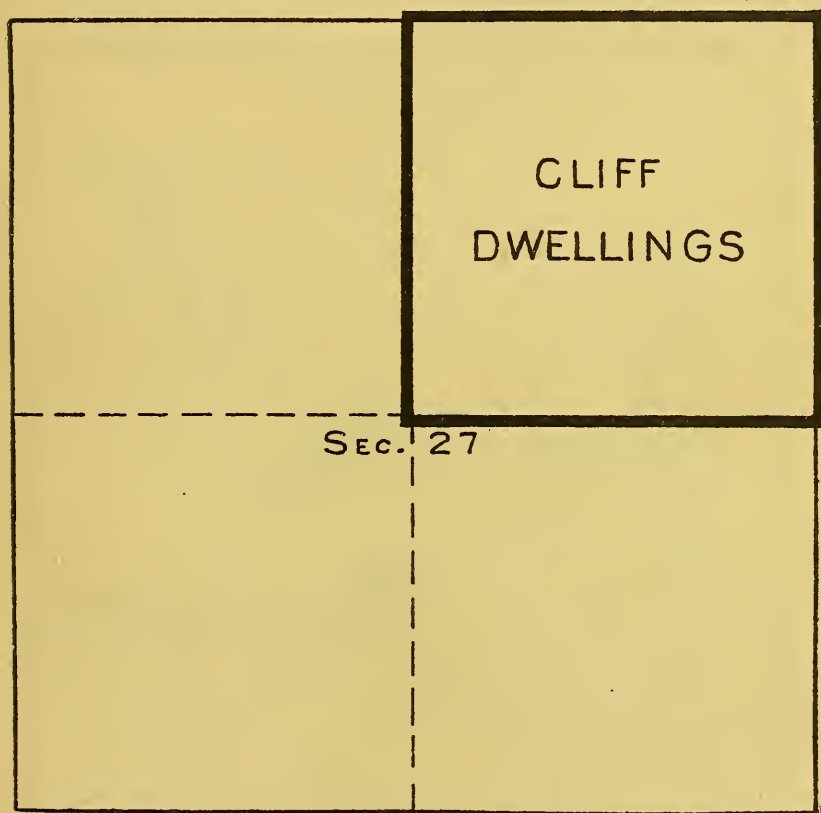


FIG. 23.—Gila Cliff-Dwellings National Monument, within Gila National Forest, N. Mex., embracing NE. $\frac{1}{4}$ of sec. 27, T. 12 S., R. 14 W., New Mexico principal meridian and base.

volcanoes in the Cascade Range, from which one of the greatest volcanic fields in the world extends, and is of special importance in tracing the history of the volcanic phenomena of that vicinity.

GILA CLIFF-DWELLINGS NATIONAL MONUMENT.

The Gila Cliff-Dwellings National Monument was created by proclamation dated November 16, 1907. These cliff-dweller ruins are neither very large nor very important, but are located in a district in which few prehistoric ruins are found.

TONTO NATIONAL MONUMENT.

The Tonto National Monument was created by proclamation dated December 19, 1907. It is located in Gila County, Ariz., and embraces two prehistoric ruins of cliff dwellings located somewhat less than 2 miles south of the Salt River Reservoir constructed by the Reclamation Service in the valley of the Salt River within the Tonto Basin, and is about 5 miles southeasterly from the town of Roosevelt. The prehistoric ruin is situated in the high, flaring entrance to a large, shallow cavern, is three stories high, approximately 60 feet wide and 30 feet deep, and contains 14 or more rooms.



FIG. 24.—Tonto National Monument, unsurveyed sec. 34, T. 4 N., R. 12 E., Gila and Salt River meridian, Ariz., containing 640 acres.

GRAND CANYON NATIONAL MONUMENT, ARIZ.

A considerable portion of the area set aside by the proclamation creating this national monument is covered by three different proclamations, one of which created the Grand Canyon Forest Reserve, one the game preserve embracing that part of the national forest north of the river, and the third the monument proclamation. It is believed that the most wonderful portion of the canyon is contained within the present limits of the national monument and game preserves.

JEWEL CAVE NATIONAL MONUMENT.

Jewel Cave, which is located 13 miles west and south of Custer, the county seat of Custer County, S. Dak., was discovered on August 18, 1900, by two prospectors, Albert and F. W. Michaud, whose attention was attracted by the noise of wind coming from a small hole in the limestone cliffs on the east side of Hell Canyon. In the hope of discovering some valuable mineral and the source of the wind, these men, in company with one Charles Bush, enlarged the

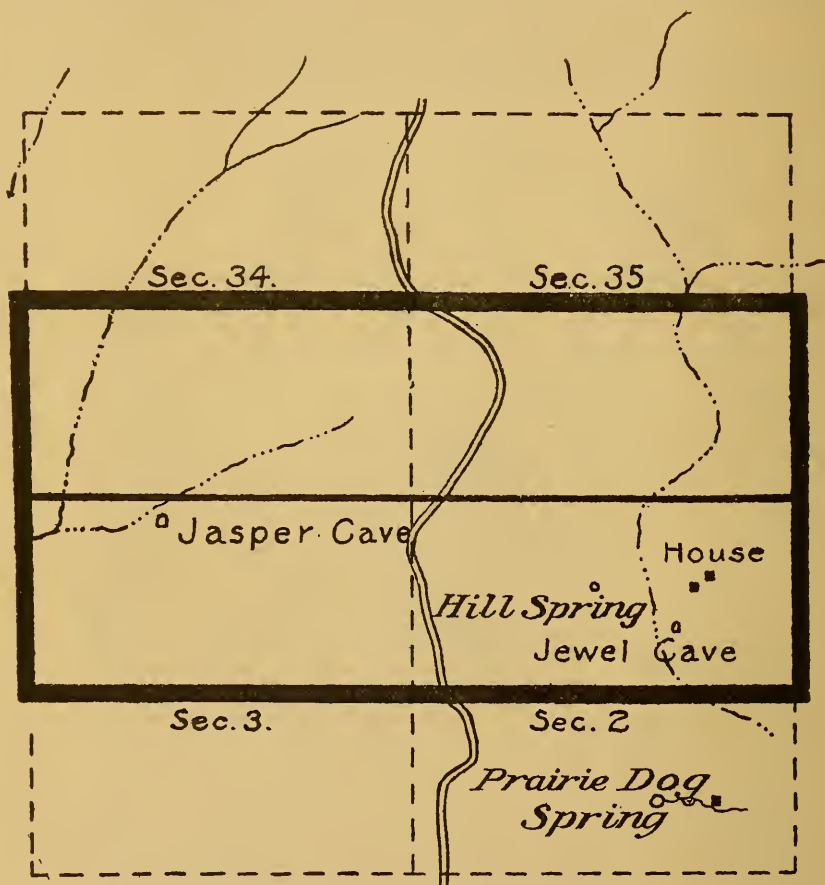


FIG. 26.—Jewel Cave National Monument, within Black Hills National Forest, S. Dak., Tps. 3 and 4 S., R. 2 E., Black Hills meridian.

opening. Jasper and manganese are found in the cave, but to what extent is not definitely known.

The prospectors have followed the main descending wind passage for a distance of $1\frac{1}{2}$ miles, which point the explorers believe to be from 600 to 700 feet below the entrance, and have explored numerous side galleries and passages. However, the cave is far from being fully explored.

The cave, as far as known, is located in limestone formation and is apparently the result of action of water. A prominent geologist who

visited this cave believes it to be an extinct geyser channel. The cave, as far as explored, consists of a series of chambers, connected by narrow passages with numerous side galleries, which increase in size as the distance from the entrance becomes greater.

The explorers have been careful observers of the action of the wind within the cave. They have discovered that ordinarily the wind blows in and out of the cave for regular periods, the periods of blowing in and out being 15 hours each, although they have known the periods to be of 72 hours' duration. Other wind passages have been discovered in the vicinity of the cave.

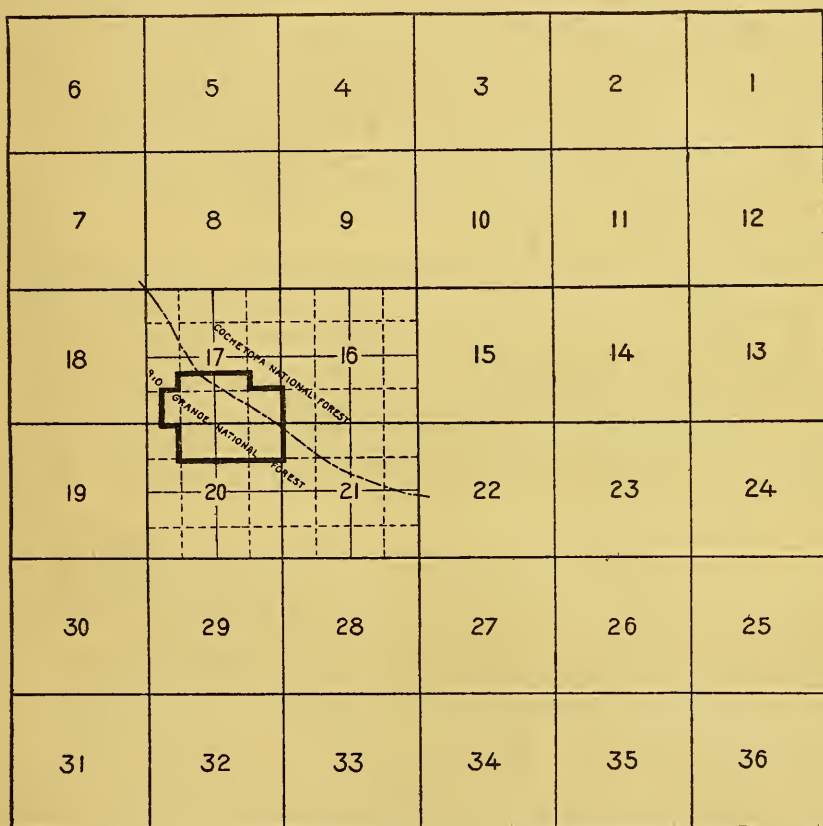


FIG. 27.—Wheeler National Monument, within Cochetopa and Rio Grande National Forests, Colo., T. 42 N., R. 2 E., New Mexico principal meridian and base.

WHEELER NATIONAL MONUMENT, COLO.

The lands embraced in this national monument are situated near the headwaters of the middle fork of Bellows Creek, a northern tributary of the Rio Grande del Norte, about 10 miles northeast of Wagon Wheel Gap, Colo., and 2 miles south of the crest of the Continental Divide.

The tract lies on the southern slope of the ridge which forms the crest of the Continental Divide. It is traversed from north to south

by numerous deep canyons with very precipitous sides, the intervening ridges being capped by pinnacle like rocks, making it practically impossible to cross the tract from east to west, even on foot. There are also many crevices cutting the ridges transversely, making an intricate net work of ravines separated by broken, precipitous ledges and broken mesas.

It is probable that the formation found here is the result of a succession of outpourings of lava and showers of volcanic ash which have left a series of nearly horizontal strata of varying degrees of hardness. Numerous pebbles and breccia of a flint like rock are embedded in the softer lavas which were probably gathered up by the flowing lava mud from the original bedrock. The formation is for the most part scoriaceous tufa and trachyte, with some rhyolite. The effect of erosion on this formation has been to cut it into sharply defined forms of many kinds. The harder broken rocks embedded in the lavas have acted as veritable chisels, greatly accelerating erosive action and making the lines and angles more sharply defined than would be the case in ordinary weathering. This erosion is still going on at a remarkably rapid rate, making the place very interesting from the geological point of view.

The fantastic forms resulting from the rapid erosion make this spot one of exceptional beauty. The numerous winding canyons, broken ridges, pinnacles, and buttes form such striking and varied scenes that it will be much visited by tourists when it has been made accessible by the construction of roads and trails.

From the most reliable data it is believed that the ill-fated expedition of John C. Fremont, in 1848, reached this immediate vicinity, when disaster came upon the party, compelling it to turn back. Skeletons of mules, bits of harness, and camp equipage are found here, lending force to the recorded data.

MOUNT OLYMPUS NATIONAL MONUMENT, WASH.

This monument was set aside by presidential proclamation of March 2, 1909, and contained approximately 608,640 acres. It was created for the purpose of preserving many objects of great and unusual scientific interest, embracing numerous glaciers, and the territory has also been from time immemorial the summer range and breeding ground of the Olympic elk, a species which is rapidly decreasing in numbers. A bill was introduced in Congress on July 15, 1911, providing for the setting aside as a national park the same tract of land as was set aside by proclamation of the President creating the Mount Olympus National Monument.

By presidential proclamation of April 17, 1912, certain lands have been eliminated from the original area embraced in the monument. This proclamation providing therefor is as follows:

I, WILLIAM H. TAFT, President of the United States of America, by virtue of the power in me vested by section 2 of the act of Congress approved June 2, 1906, entitled "An act for the preservation of American antiquities," do hereby declare and proclaim that the south half of the southwest quarter of section twenty-one, and the north half of the northwest quarter of section twenty-eight, in township twenty-four north, range eight west, Willamette meridian, Washington, be, and the same are hereby, eliminated from the Mount Olympus National Monument. The provisions of the proclamation of March 2, 1909,

shall remain in full force and effect as to all other lands thereby reserved as a national monument.

In witness whereof I have hereunto set my hand, and caused the seal of the United States to be affixed.

Done at the city of Washington this seventeenth day of April, in the [SEAL.] year of our Lord one thousand nine hundred and twelve, and of the Independence of the United States the one hundred and thirty-sixth.

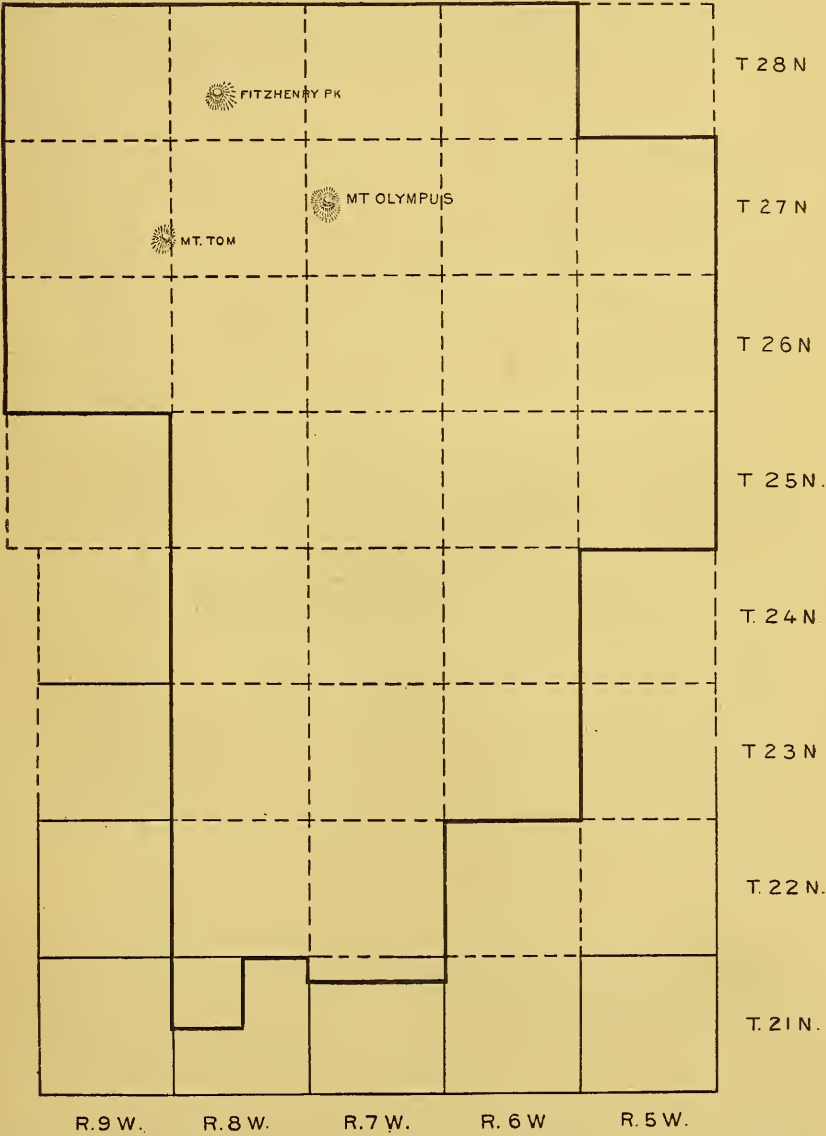


FIG. 28.—Mount Olympus National Monument, within Olympic National Forest, Wash.

OREGON CAVES NATIONAL MONUMENT, OREG.

The Oregon Caves or “Marble Halls” of Josephine County, discovered in 1874, are located in the Siskiyou National Forest, about 30

miles south of Grants Pass in Cave Mountain, a peak of the Greyback Range, that divides the headwaters of the Applegate and Illinois Rivers, and connects with the Siskiyou Mountains near the north line of California.

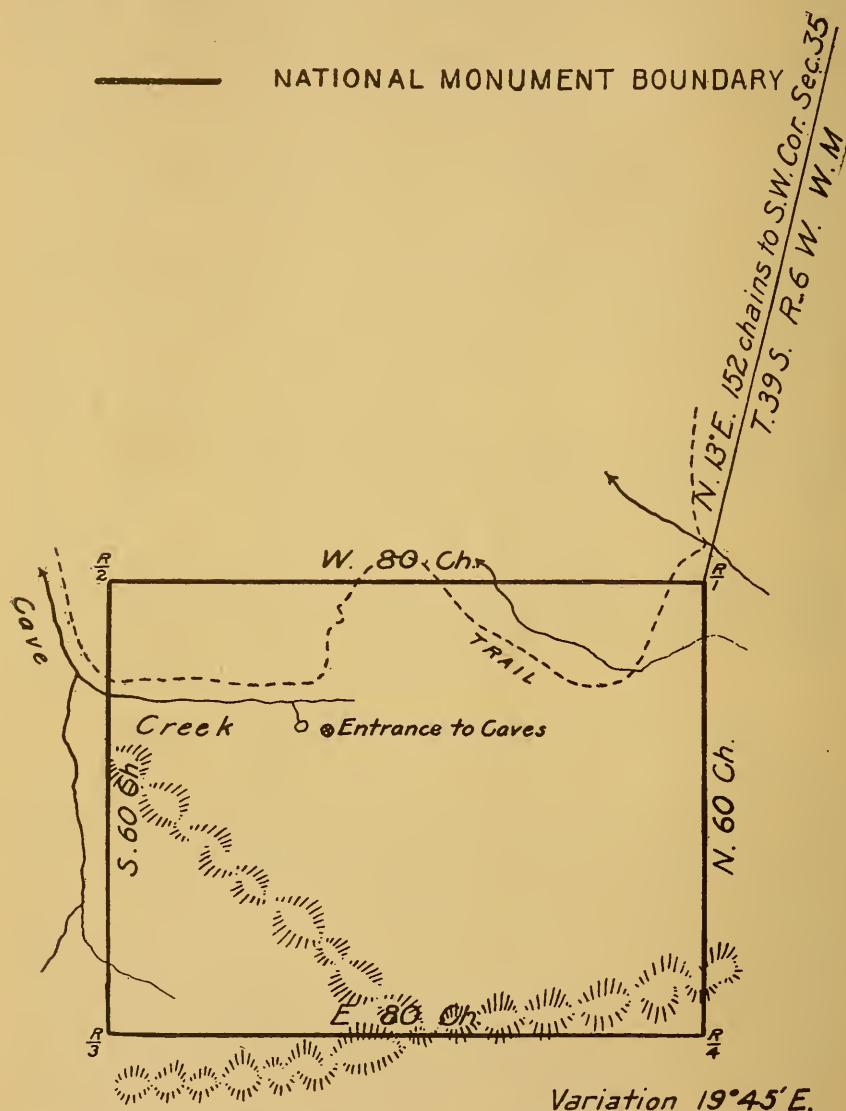


FIG. 29.—Oregon Caves National Monument, within Siskiyou National Forest, Oreg.

Cave Mountain, the peak which contains these caves, rises to an elevation of about 6,000 feet, and is of limestone formation. The main openings around which the national monument has been created are at an elevation of 4,000 feet, but the entire mountain side for 5 or 6 miles shows caverns of various sizes and in all probability through-

out its interior is honeycombed like the portion that has been explored.

These caves are more of a series of galleries than of roomy caverns, though many beautiful rooms have been discovered, while miles of galleries have been visited; but there are thousands of passageways leading in all directions—partly closed by stalactites—that have never been opened, and with the distant and unexplored openings on the opposite side of the mountain the magnitude of the Oregon Caves can be said to be practically unknown.

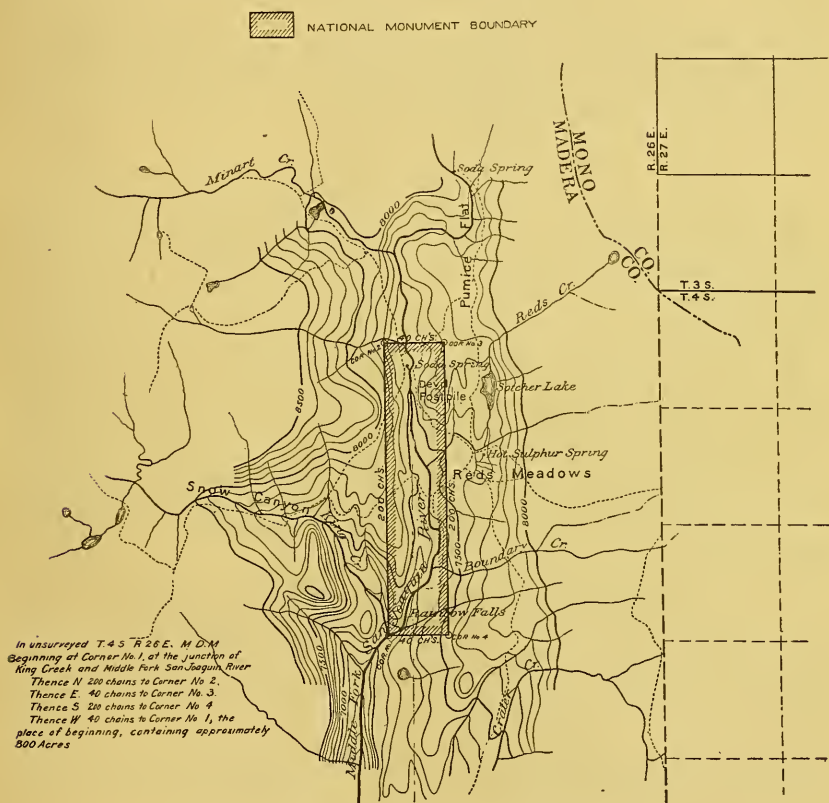


FIG. 30.—Devils Postpile National Monument, Cal.

Many small streams are found at different elevations, and larger bodies of running water can be heard in pits bottomless so far as measured (by 300-foot line). This running water probably accounts for currents of wind that in some of the galleries blow so hard as to extinguish an open light at once.

The lime deposits take many beautiful forms—massive pillars, delicate stalactites of alabaster whiteness with the crystal drop of water carrying its minute deposit of lime from which they are formed, and broad sheets resembling drapery with graceful curves and waves that were certainly made by varying currents of wind during formation.

The Forest Service has rebuilt and improved the trails leading to the caves from each side of the divide in order to more easily pro-

tect the valuable forest surrounding and to make the caves more accessible to tourists.

DEVILS POSTPILE NATIONAL MONUMENT, CAL.

The Devils Postpile consists of basaltic rocks laid down in the form of an immense pile of posts, and while there are similar formations in different parts of the country, this is especially prominent, being one of the most noted of its kind on the continent and said to rank with the famous Giants Causeway on the coast of Antrim, in the north of Ireland.

Below the postpile and above the junction of King Creek and the middle fork of the San Joaquin River is Rainbow Falls, similar to the well-known Vernal Falls of the Yosemite Valley, and one of the few of its kind on the continent.

BIRD RESERVES.

All of the bird reserves have been created through reference from the Interior Department to the President of forms of Executive orders providing therefor. These reserves are regarded as in all essential particulars reservations of public lands for public use or other purposes, for which there are numerous precedents. The first specific act of Congress providing for the protection of birds by bird reserves created by Executive order was introduced by Hon. John F. Lacy, of Iowa, and became a law on June 28, 1906. (34 Stat., 536.) This act made it unlawful to kill birds, to take their eggs, or to willfully disturb birds upon the reservations, and it provides a fine of not exceeding \$500 or imprisonment for not exceeding six months, or both fine and imprisonment, for each conviction secured. This law was substantially reenacted in the new penal code approved March 4, 1909 (35 Stat., 1104), in the following language:

SEC. 84. Whoever shall hunt, capture, wilfully disturb, or kill any bird of any kind whatever, or take the eggs of any such bird, on any lands of the United States which have been set apart or reserved as breeding grounds for birds by any law, proclamation, or Executive order, except under such rules and regulations as the Secretary of Agriculture may from time to time prescribe, shall be fined not more than five hundred dollars or imprisoned not more than six months, or both.

The reservations now existing, which are being administered under the direction of the Biological Survey, Department of Agriculture, are 56 in number, as follows:

Bird reserves created.

Name of reservation.	Date.	Location.	Area.
Pelican Island.....	Mar. 14, 1903	East Florida coast.....	5.50 acres.
Breton Island.....	(Oct. 4, 1904 Nov. 11, 1905)	} Southeast coast of Louisiana.....	Unknown.
Stump Lake.....	Mar. 9, 1905		
Huron Islands.....	Oct. 10, 1905	North Dakota.....	27.39 acres.
Siskiwi Islands.....	do.....	Lake Superior, Mich.....	Unknown.
Passage Key.....	do.....	do.....	Do.
Indian Key.....	Feb. 10, 1906	Tampa Bay, Fla.....	36.37 acres.
Fern Islands.....	Aug. 8, 1907	do.....	90 acres.
Shell Keys.....	Aug. 17, 1907	Mouths of Mississippi River, La.....	Unknown.
Three Arch Rocks.....	Oct. 14, 1907	South Louisiana coast.....	Do.
Flattery Rocks.....	Oct. 23, 1907	West Oregon coast.....	Do.
Quillayute Needles.....	do.....	West Washington coast.....	Do.

Bird reserves created—Continued.

Name of reservation.	Date.	Location.	Area.
Copalis Rock.....	Oct. 23, 1907	West Washington coast.....	Unknown.
East Timbalier Island.....	Dec. 7, 1907	South Louisiana coast.....	Do.
Mosquito Inlet.....	Feb. 24, 1908	East Florida coast.....	Do.
Tortugas Keys.....	Apr. 6, 1908	Florida Keys, Fla.....	Do.
Klamath Lake.....	Aug. 8, 1908	Oregon and California.....	Do.
Key West.....	do.	Florida Keys, Fla.....	Do.
Lake Malheur.....	Aug. 18, 1908	Oregon.....	Do.
Chase Lake.....	Aug. 28, 1908	North Dakota.....	Do.
Pine Island.....	Sept. 15, 1908	West Florida coast.....	Do.
Matlacha Pass.....	Sept. 26, 1908	do.....	Do.
Palma Sola.....	do.	do.....	Do.
Island Bay.....	Oct. 23, 1908	Florida.....	Do.
Loch Katrine.....	Oct. 26, 1908	Wyoming.....	Do.
Hawaiian Islands.....	Feb. 3, 1909	Hawaii.....	Do.
East Park.....	Feb. 25, 1909	California.....	Do.
Cold Springs.....	do.	Oregon.....	Do.
Shoshone.....	do.	Wyoming.....	Do.
Pathfinder.....	do.	do.....	Do.
Bellefourche.....	do.	South Dakota.....	Do.
Strawberry Valley.....	do.	Utah.....	Do.
Salt River.....	do.	Arizona.....	Do.
Deer Flat.....	do.	Idaho.....	Do.
Minidoka.....	do.	do.....	Do.
Willow Creek.....	do.	Montana.....	Do.
Carlsbad.....	do.	New Mexico.....	Do.
Rio Grande.....	do.	do.....	Do.
Keechelus Lake.....	do.	Washington.....	Do.
Kachess Lake.....	do.	do.....	Do.
Cealun Lake.....	do.	do.....	Do.
Bumping Lake.....	do.	do.....	Do.
Conconully.....	do.	do.....	Do.
Bering Sea.....	Feb. 27, 1909	Alaska.....	Do.
Pribilof.....	do.	do.....	Do.
Tuxedni.....	do.	do.....	Do.
Farallon.....	do.	California.....	Do.
Culebra.....	do.	Porto Rico.....	Do.
Yukon Delta.....	do.	Alaska.....	Do.
St. Lazaria.....	do.	do.....	Do.
Bogoslof.....	Mar. 2, 1909	do.....	Do.
Clear Lake.....	Apr. 11, 1911	California.....	Do.
Forrester Island.....	Jan. 11, 1912	Alaska.....	Do.
Hazy Islands.....	do.	do.....	Do.
Niobrara.....	do.	Nebraska.....	¹ 14,640 acres.
Green Bay.....	Feb. 21, 1912	Wisconsin.....	1.87 acres.

¹ Approximate area.

BIRD RESERVES ENLARGED AND REDUCED.

Pelican Island.....	Jan. 26, 1909	Florida (enlarged).....	Unknown.
Mosquito Inlet.....	Apr. 2, 1909	do.....	Do.
Cold Springs.....	Nov. 25, 1911	Oregon (enlarged).....	Do.
Clear Lake.....	Jan. 13, 1912	California (reduced).....	Do.
Minidoka.....	Feb. 21, 1912	Idaho (enlarged).....	Do.
Niobrara.....	Nov. 14, 1912	Nebraska (enlarged).....	¹ 15,253.7 acres.

¹ Approximate area.

Four new bird reserves were created during the year, viz, Forrester Island and Hazy Islands, in Alaska; the Niobrara Reserve, in Nebraska (which has since been enlarged); and the Green Bay Reserve in Wisconsin. The three reserves first named were created on January 11, 1912, and the last on February 21, 1912. A number of these reservations lie within tracts reserved or set aside for purposes other than the protection of birds, such as reclamation withdrawals and naval reserves, but in all such cases the administration of the bird reservation is made subject to the use of the reservation under the primary and more important segregation.

REPORT ON

WIND CAVE NATIONAL PARK, SULLYS HILL
PARK, CASA GRANDE RUIN, MUIR WOODS,
PETRIFIED FOREST, AND OTHER NATIONAL
MONUMENTS, INCLUDING LIST OF
BIRD RESERVES

1913

COMPILED IN THE OFFICE OF
THE SECRETARY OF THE INTERIOR



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30. Devils Postpile National Monument, California.....	44

WIND CAVE NATIONAL PARK

Embracing Sections 34, 35 and 36, T. 5 S., R. 5;
Sections 1, 2, 3, E $\frac{1}{2}$ of 4, E $\frac{1}{2}$ of 9, and Sec's 10, 11, 12, 13, 14, 15, E $\frac{1}{2}$
of 16, T. 6 S., R. 5; Section 31, T. 5 S., R. 6; Sections 6
and 7 T. 6 S., R. 6,

All East of BLACK HILLS MERIDIAN

SOUTH DAKOTA



REPORT ON WIND CAVE NATIONAL PARK, SULLYS HILL PARK, CASA GRANDE RUIN, MUIR WOODS, PETRIFIED FOREST, AND OTHER NATIONAL MONUMENTS, TOGETHER WITH LIST OF BIRD RESERVES.

WIND CAVE NATIONAL PARK.

The act of Congress approved January 9, 1903 (32 Stat., 765), reserved a tract of land containing 10,522 acres in the State of South Dakota, 12 miles east of the town of Hot Springs and about the same distance southeast of Custer, as a public park, to be known as the Wind Cave National Park.

At the time of the creation of the park there were 10 entries covering lands within the park, aggregating 1,519.15 acres. Thereafter up to 1913, the Government had secured title to all lands within the park excepting the NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ and NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 35, T. 5 S., R. 5 E., Black Hills meridian, embracing 80 acres, patented to Jonathan C. West on December 31, 1904. This land, however, has since been purchased by the Government from W. A. Rankin, the last owner, and now forms part of the game preserve established by the act approved August 10, 1912 (37 Stat., 293), to which reference is made hereafter.

Mr. A. C. Boland acted as superintendent of this park from May 1, 1911, until November 15, 1913, when he resigned. He was succeeded on December 2, 1913, by Mr. F. M. Dille, the present acting superintendent.

During the fiscal year ending June 30, 1913, 3,988 tourists entered the park, an increase of 789 over the preceding year, of whom 2,155 came in licensed vehicles and the remainder in private conveyances. More than a hundred privately owned automobiles passed through the park. No stock was driven through the park.

Nine permits were granted for transportation of passengers through the park, at the rate of \$50 per vehicle, all of which were for use of automobiles.

The roads and bridges in the park are in good condition, but there is need of constant repair work to the roads, especially after rains.

The buildings in the park consist of superintendent's house and barn, blacksmith shop, and registration office and dressing rooms, all in good condition; also a cave house (through which entrance to the cave is effected), which requires some minor repairs. During the year the old hotel building opposite the superintendent's house was torn down, and a registration office built on its site, the same being a frame building 20 by 40 feet, one story high, with double floor, ceiled and painted inside, shingled, painted, and sided. Within the cave the bridges, stairs, and paths are in good condition,

The park water system is in good condition, and the supply has been sufficient for all purposes. Plans have been made for a cement

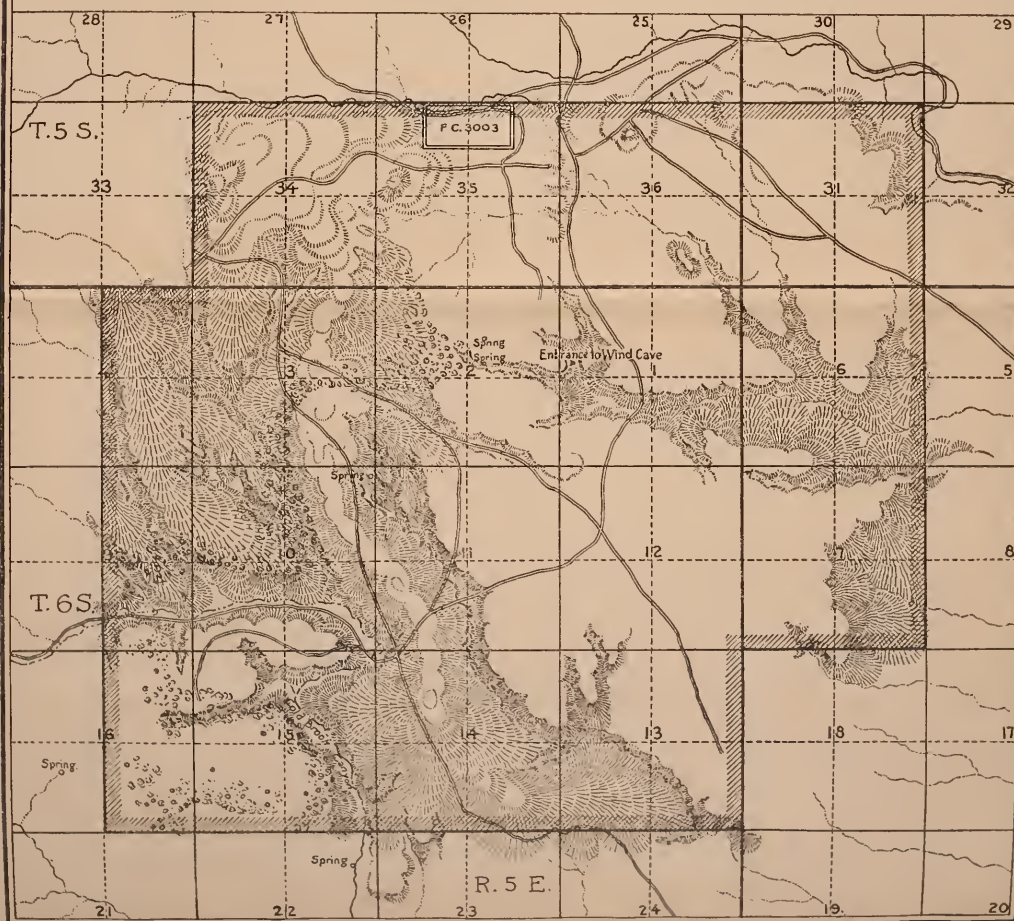
WIND CAVE NATIONAL PARK

Embracing Sections 34, 35 and 36, T. 5 S., R. 5;
Sections 1, 2, 3, E $\frac{1}{2}$ of 4, E $\frac{1}{2}$ of 9, and Sec's 10, 11, 12, 13, 14, 15, E $\frac{1}{2}$
of 16, T. 6 S., R. 5, Section 31, T. 5 S., R. 6; Sections 6
and 7 T. 6 S., R. 6.

All East of BLACK HILLS MERIDIAN

SOUTH DAKOTA

Containing 10,522.17 acres.



reservoir to be built near the superintendent's house, which when completed will permit water to be run into the house, registration office, and to any place on the grounds.

On account of lack of appropriation by Congress for maintenance of the park during the fiscal year 1913, it was impossible to do much improvement work.

A new telephone line was built by the Peoples Telephone & Telegraph Co., of Hot Springs, S. Dak., from the south boundary of the park to the superintendent's house, making it possible to have direct connection with Hot Springs and all lines connecting at that point.

A national game preserve has been established in the Wind Cave National Park under the provisions of "An act making appropriations for the Department of Agriculture for the fiscal year ending June thirtieth, nineteen hundred and thirteen," approved August 10, 1912 (37 Stat., 293), as follows:

For the establishment of a national game preserve, to be known as the Wind Cave National Game Preserve, upon the land embraced within the boundaries of the Wind Cave National Park, in the State of South Dakota, for a permanent national range for a herd of buffalo to be presented to the United States by the American Bison Society, and for such other native American game animals as may be placed therein. The Secretary of Agriculture is authorized to acquire by purchase or condemnation such adjacent lands as may be necessary for the purpose of assuring an adequate, permanent water supply and to inclose the said game preserve with a good and substantial fence and to erect thereon all necessary sheds and buildings for the proper care and maintenance of the said animals, twenty-six thousand dollars, to be available until expended.

Estimates have been submitted to Congress for protection and improvement of the Wind Cave National Park during the fiscal year commencing July 1, 1914, in total sum of \$2,500, covering repairs and maintenance of roads and bridges (\$500); a similar amount for improvements and repairs to the cave; improvements of grounds (\$250); general repair and upkeep of the park water system (\$200); for telephone service (\$50); and for salary of superintendent (\$1,000).

GENERAL REGULATIONS OF MARCH 30, 1912.

Pursuant to authority conferred by the act of Congress approved January 9, 1903, the following rules and regulations for the government of the Wind Cave National Park, in South Dakota, are hereby established and made public:

1. It is forbidden to remove or injure the specimens or formations in and around the Wind Cave, or to deface the same by written inscription or otherwise, or to injure or disturb in any manner or carry off any of the mineral deposits, specimens, natural curiosities, or wonders on the Government lands within the park.

2. No person shall be permitted to enter the cave unless accompanied by the superintendent or other park employee, or by competent guides.

3. It is forbidden to cut or injure any timber growing on the park lands, or to deface or injure any Government property. Camping parties will be allowed to use dead or fallen timber for fuel.

4. Fires should be lighted only when necessary and completely extinguished when no longer required. The utmost care must be exercised at all times to avoid setting fire to the timber and grass.

5. Hunting or killing, wounding, or capturing any bird or wild animal on the park lands, except dangerous animals when necessary to prevent them from destroying life or inflicting an injury, is prohibited. The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing such birds or wild animals, or in possession of game killed on the park lands under other circumstances than prescribed above, will be taken up by the superintendent and held subject to the order of the Secretary of the Interior, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation and the actual owner thereof was not a party to such violation. Firearms will only be permitted in the park on written permission from the superintendent thereof.

6. Fishing in any other way than with hook and line is forbidden, and may be prohibited by order of the superintendent in any of the waters of the park, or limited therein to any specified season of the year, until otherwise ordered by the Secretary of the Interior. Fishing for purposes of merchandise or profit is forbidden. All fish less than 8 inches in length should at once be returned to the water with the least damage possible to the fish. Fish that are to be retained must be at once killed by a blow on the back of the head or by thrusting a knife or other sharp instrument into the head.

7. No person will be permitted to reside permanently, engage in any business, or erect buildings, etc., upon the Government lands in the park, without permission, in writing, from the Secretary of the Interior. The superintendent may grant authority to competent persons to act as guides and revoke the same in his discretion. No pack trains will be allowed in the park unless in charge of a duly registered guide.

8. Owners of patented lands within the park limits are entitled to the full use and enjoyment thereof; the boundaries of such lands, however, must be determined, and marked and defined, so that they may be readily distinguished from the park lands. While no limitations or conditions are imposed upon the use of such private lands so long as such use does not interfere with or injure the park, private owners must provide against trespass by their stock or cattle, or otherwise, upon the park lands, and all trespasses committed will be punished to the full extent of the law. Stock may be taken over the park lands to patented private lands with the written permission and under the supervision of the superintendent, but such permission and supervision are not required when access to such private lands is had wholly over roads or lands not owned or controlled by the United States.

9. Allowing the running at large, herding, or grazing of cattle or stock of any kind on the Government lands in the park, as well as the driving of such stock or cattle over same, is strictly forbidden, except where authority therefor has been granted by the superintendent. All cattle or stock found trespassing on the park lands will be impounded and disposed of as directed in regulations approved March 30, 1912.

10. No drinking saloon or barroom will be permitted upon Government lands in the park.

11. Private notices or advertisements shall not be posted or displayed on the Government lands within the reservation, except such as may be necessary for the convenience and guidance of the public.

12. Persons who render themselves obnoxious by disorderly conduct or bad behavior, or who violate any of the foregoing rules, will be summarily removed from the park and will not be allowed to return without permission, in writing, from the Secretary of the Interior or the superintendent of the park.

No lessee or licensee shall retain in his employ any person whose presence in the park shall be deemed and declared by the superintendent to be subversive of the good order and management of the reservation.

13. Any person who violates any of the foregoing regulations will be deemed guilty of a misdemeanor and, upon conviction, be fined not more than \$1,000, or be imprisoned not more than 12 months, or both, in the discretion of the court, as provided by the act creating the park.

14. The superintendent designated by the Secretary is hereby authorized and directed to remove all trespassers from the Government lands in the park and enforce these rules and regulations and all the provisions of the act of Congress aforesaid.

REGULATIONS OF MARCH 30, 1912, GOVERNING THE IMPOUNDING AND DISPOSITION OF LOOSE LIVE STOCK.

Horses, cattle, or other domestic live stock running at large or being herded or grazed on Government lands in the Wind Cave National Park without authority therefor will be taken up and impounded by the superintendent, who will at once give notice thereof to the owner, if known. If the owner is not known, notice of such impounding, giving a description of the animal or animals, with the brands thereon, will be posted in six public places inside the park and in two public places outside the park. Any owner of an animal thus impounded may, at any time before the sale thereof, reclaim the same upon proving ownership and paying the cost of notice and all expenses incident to the taking up and detention of such animal, including the cost of feeding and caring for the same. If any animal thus impounded shall not be reclaimed within 30 days from notice to the owner or from the date of posting notices, it shall be sold at public auction at such time and place as may be fixed by the superintendent after 10 days' notice, to be given by posting notices in six public places in the park and two public places outside the park, and by mailing to the owner, if known, a copy thereof.

All money received from the sale of such animals and remaining after the payment of all expenses incident to the taking up, impounding, and selling thereof shall be carefully retained by the superintendent in a separate fund for a period of six months, during which time the net proceeds from the sale of any animal may be claimed by and paid to the owner upon the presentation of satisfactory proof of ownership, and if not so claimed within six months from the date of sale such proceeds shall be turned into the Wind Cave National Park fund.

The superintendent shall keep a record in which shall be set down a description of all animals impounded, giving the brands found on

them, the date and locality of the taking up, the date of all notices and manner in which they were given, the date of sale, the name and address of the purchaser, the amount for which each animal was sold and the cost incurred in connection therewith, and the disposition of the proceeds.

The superintendent will, in each instance, make every reasonable effort to ascertain the owner of animals impounded and to give actual notice thereof to such owner.

SULLYS HILL PARK.

This reservation, set aside by Executive proclamation dated June 2, 1904, under the act approved April 27, 1904 (33 Stat., 319), con-

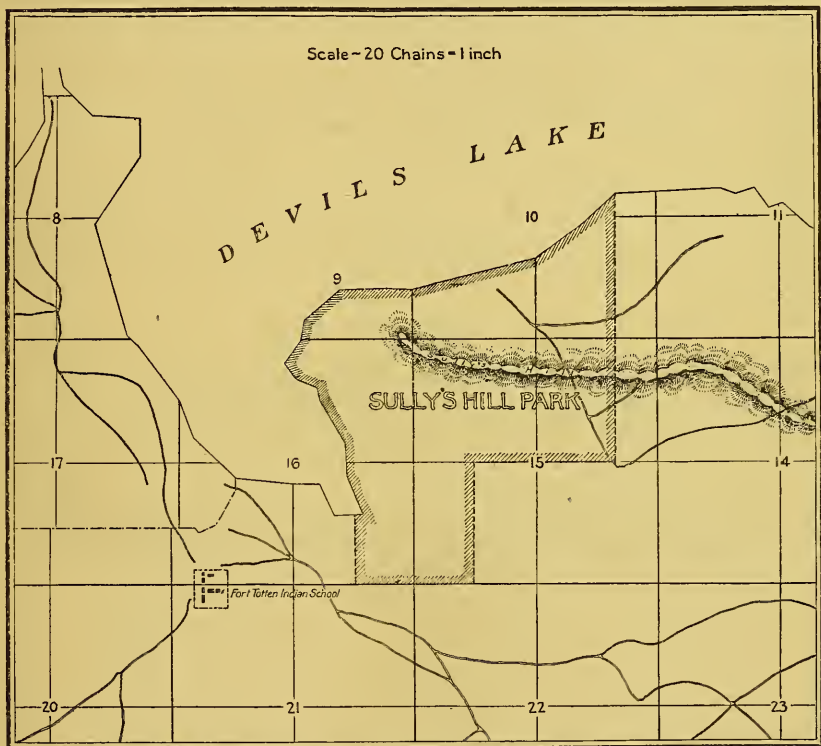


FIG. 1.—Map of Sullys Hill Park.

tains about 780 acres. It is located on the south shore of Devils Lake, N. Dak., having about 2 miles of shore line, with its western boundary 1 mile east of the Fort Totten Indian School. Inasmuch as no appropriation has been made for the care and protection of this reservation, Mr. Charles M. Ziebach, in charge of the Indian industrial school (Fort Totten), has been continued as acting superintendent, and required to exercise the necessary supervision and control over the same until appropriation is made therefor by Congress.

The tract is well wooded and has an ample supply of water and many rugged hills, among which, on the western boundary, lies what is known as Sullys Hill. In the southwestern part is a small body of water known as Sweet Water Lake, west of which the surface is generally level and the soil good. The acting superintendent in his report for 1913 states:

No appropriation has been made by Congress for the improvement or maintenance of this park since the date of its creation, and nothing has been done toward building permanent roads or otherwise making this site attractive. It is estimated that an aggregate of 300 people visited this park during the past year, a very small portion of them spending a single night there, as there are no other attractions than its natural beauties. By means of a small appropriation this park could be made one of the most beautiful and attractive spots in the State of North Dakota, as its natural beauties can not be excelled. All that is necessary would be to make some roads so as to be easily accessible to the public, as but a small space bordering on a fresh-water lake is now frequented by the public as a picnic grounds. A portion of the park should be fenced and stocked for a game preserve, as it abounds with a natural growth of timber and grass. There should be erected at this place a suitable building for residence of a keeper, or guard. There also should be some work done in the shape of grubbing out undergrowth, etc., so as to make the place more accessible. This park is one of the beauty spots of North Dakota, and should not be left unimproved.

Estimates for the fiscal year 1915 have been submitted by the department to Congress for the protection and improvement of this park, covering employment of a guard (\$600); for material and labor in walling up springs, (\$500); and for labor in grubbing out underbrush around Sweet Water Lake and shore line of Devils Lake, (\$400).

CASA GRANDE RUIN.

This reservation is located near Florence, Ariz., about 18 miles northeast of Casa Grande station, on the Southern Pacific Railroad, and contains about 480 acres. It was set aside by Executive order dated June 22, 1892, under the act approved March 2, 1889 (25 Stat., 961). By presidential proclamation of December 10, 1909, the boundaries of the reservation were changed by the elimination of 120 acres on which there were no prehistoric ruins and the inclusion of a tract of 120 acres adjoining the reservation on the east on which are located important mounds of historic and scientific interest.

Casa Grande is an Indian ruin of undetermined antiquity, which was discovered in 1694 by Padre Kino, a Jesuit missionary. This great house is said to be the most important ruin of its type in the Southwest, and as such it has strong claims for archæological study, repair, and permanent preservation. It is built of puddled clay molded into walls and dried in the sun, and is of perishable character. The main building was originally five or six stories high and covered a space 59 feet by 43 feet 3 inches. The walls have been gradually disintegrating, owing to the action of the elements. A corrugated iron roof has heretofore been erected over this building to protect it, so far as practicable, from further decay.

Surrounding Casa Grande proper is a rectangular walled inclosure or "compound," having an area of about 2 acres. In this inclosure, which has been called Compound A, excavations conducted under the Bureau of American Ethnology have resulted in the uncovering of a number of buildings or clusters of rooms, and others are known to exist, but have not been excavated. Two other compounds were discovered and designated, respectively, Compound B and Com-

pound C, but the latter has not been excavated and is still in the form of a mound. These three compounds together constitute what is known as the Casa Grande group of ruins. As a result of this work, conducted under the Bureau of American Ethnology, the points of interest to visitors have been materially augmented. The ground plan of the ruin was increased by some 58 rooms, a number of plazas and surrounding walls, making the total number of rooms now open on the ground floor 100.

Reservation boundary

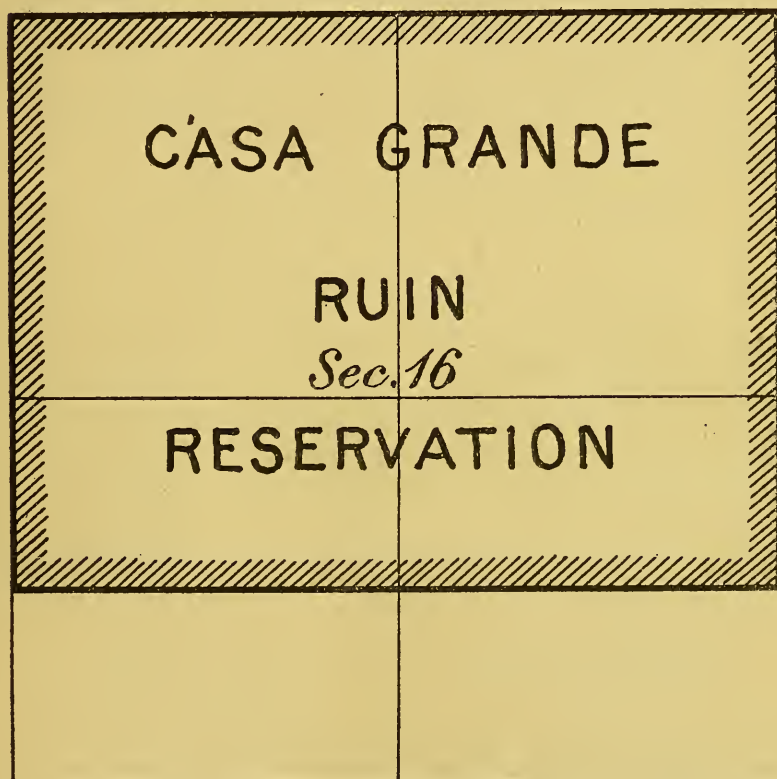


FIG. 2.—Casa Grande Ruin Reservation, Ariz., embracing the NW. $\frac{1}{4}$, the NE. $\frac{1}{4}$, the N. $\frac{1}{2}$ of the SW. $\frac{1}{4}$, and the N. $\frac{1}{2}$ of the SE. $\frac{1}{4}$ of sec. 16, T. 5 S., R. 8 E., Gila and Salt River meridian; set aside by Executive order of June 22, 1892, under act of March 2, 1889.

Mr. Frank Pinkley, the custodian, who resides on the reservation, reports the number of visitors during 1913 to have been larger than for any year during the past 12 years. Mr. Pinkley was supplied in June with a quantity of the department's circular of general information relating to the ruin, which is an abstract from a detailed report on the ruin by Prof. J. W. Fewkes, published in the Twenty-eighth Annual Report of the Bureau of American Ethnology. It is anticipated that, due to distribution of this circular, the number of visitors during 1914 will be largely increased.

The department has submitted to Congress estimates for the fiscal year beginning July 1, 1914, for painting of protecting roof of the main ruin, \$125; repairing curbing of well, \$75; and for providing windmill or engine for lifting water for visitors' use, \$300.

NATIONAL MONUMENTS AND PRESERVATION OF AMERICAN ANTIQUITIES.

GENERAL STATEMENT.

By the act approved June 8, 1906, entitled "An act for the preservation of American antiquities," the President of the United States is authorized, "in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments." Under such authority the President has created the following monuments:

National monuments administered by Interior Department.

Name.	State.	Date.	Area.
			<i>Acres.</i>
Devils tower.....	Wyoming.....	Sept. 24, 1906	1,152
Montezuma Castle.....	Arizona.....	Dec. 8, 1906	160
El Morro.....	New Mexico.....	.....do.....	160
Chaco Canyon.....	.....do.....	Mar. 11, 1907	¹ 20,629
Muir Woods ²	California.....	Jan. 9, 1908	295
Pinnacles.....	.....do.....	Jan. 16, 1908	2,080
Tumacacori.....	Arizona.....	Sept. 15, 1908	10
Mukuntuweap.....	Utah.....	July 31, 1909	¹ 15,840
Shoshone Cavern.....	Wyoming.....	Sept. 21, 1909	210
Natural bridges ³	Utah.....	Sept. 25, 1909	¹ 2,740
Gran Quivira.....	New Mexico.....	Nov. 1, 1909	¹ 160
Sitka.....	Alaska.....	Mar. 23, 1910	¹ 57
Rainbow Bridge ⁴	Utah.....	May 30, 1910	160
Lewis and Clark Cavern.....	Montana.....	May 16, 1911	160
Colorado.....	Colorado.....	May 24, 1911	13,883
Petrified forest.....	Arizona.....	July 31, 1911	25,625
Navajo.....	.....do.....	Mar. 14, 1912	360

¹ Estimated area.

² Donated to the United States.

³ Originally set aside by proclamation of Apr. 16, 1908, and contained only 120 acres.

⁴ Within an Indian reservation.

The following regulations for the protection of national monuments were promulgated on November 19, 1910:

1. Fires are absolutely prohibited.
2. No firearms are allowed.
3. No fishing permitted.
4. Flowers, ferns, or shrubs must not be picked, nor may any damage be done to the trees.
5. Vehicles and horses may be left only at the places designated for this purpose.
6. Lunches may be eaten only at the spots marked out for such use, and all refuse and litter must be placed in the receptacles provided.
7. Pollution of the water in any manner is prohibited; it must be kept clean enough for drinking purposes.
8. No drinking saloon or barroom will be permitted.

9. Persons rendering themselves obnoxious by disorderly conduct or bad behavior, or who may violate any of the foregoing rules, will be summarily removed.

NAMES AND ADDRESSES OF OFFICERS HAVING SUPERVISION OF NATIONAL MONUMENTS.

George Hayworth, new customhouse building, San Francisco, Cal.:

Muir Woods National Monument, Cal.

Pinnacles National Monument, Cal.

Gratz W. Helm, Federal building, Los Angeles, Cal.:

Montezuma Castle National Monument, Ariz.

Petrified Forest National Monument, Ariz.

Tumacacori National Monument, Ariz.

Navajo National Monument, Ariz.

George E. Hair, Federal building, Salt Lake City, Utah:

Mukuntuweap National Monument, Utah.

Natural Bridges National Monument, Utah.

Rainbow Bridge National Monument, Utah.

Theo N. Espe, Santa Fe, N. Mex.:

El Morro National Monument, N. Mex.

Chaco Canyon National Monument, N. Mex.

Gran Quivira National Monument, N. Mex.¹

Ira Lantz, Helena, Mont., Lewis and Clark Cavern National Monument, Mont.

Adelbert Baker, Cheyenne, Wyo.:

Devils Tower National Monument, Wyo.

Shoshone Cavern National Monument, Wyo.

A. Christensen, special agent in charge field service, Alaska (307 Federal building, Seattle, Wash.), Sitka National Monument, Alaska.

One new monument, Cabrillo National Monument, was created October 14, 1913, at Point Loma, of a small tract of land containing 21,910 square feet which lies within the military reservation at Fort Rosecrans, Cal., the same being of historic interest because of the discovery of the territory now partly embraced in the State of California, by Juan Rodriguez Cabrillo, who at this point first sighted land on September 28, 1542. This monument is under the jurisdiction of the War Department.

Administrative conditions.—The supervision of these various monuments has, in the absence of any specific appropriation for their protection and improvement, necessarily been intrusted to the field officers of the department having charge of the territory in which the several monuments are located.

Administrative conditions continue to be unsatisfactory, as no appropriation of funds has yet been made available for this important, protective, and preservative work. Such supervision as has been possible in the cases of a few monuments only has been wholly inadequate and has not prevented vandalism, unauthorized exploitation or spoliation of relics found in those prehistoric ruins, whose preservation is contemplated by the passage of the act of June 8, 1906. An estimate in the sum of \$5,000 for protection of these monuments was submitted last year, but no appropriation was made.

An estimate in similar amount for preservation, development, administration, and protection of these national monuments was submitted on December 15, 1913 (through the Secretary of the Treasury), by the Department of the Interior to Congress, and is incorporated in House Document No. 506, Sixty-third Congress, second session. This fund is

¹ By arrangement with the Secretary of Agriculture, the district forester of the Manzano National Forest, with headquarters at Albuquerque, N. Mex., has taken charge of patrol and protection of the Gran Quivira National Monument, as the Interior Department has no field officer in the immediate vicinity of the monument.

needed, not so much for the purpose of preserving by restoration the objects reserved in the national monuments as to prevent the removal of valuable relics and vandalism. Monuments suffering from these causes should be provided with a custodian or superintendent, and in this way a small general appropriation can be made most useful and its expenditure will be wholly in the interest of the public. The protection and preservation of the national monuments as public reservations are of great interest and importance because a great variety of objects, historic, prehistoric, and scientific in character, are thus preserved for public use intact, instead of being exploited by private individuals for gain and their treasures scattered. These reserves should be administered in connection with the national parks, which they strongly resemble. It would be difficult to define one in terms that would exclude the other. The renewal of the estimate for a small appropriation has been made for the purpose of keeping this class of reserves intact until such time as Congress shall authorize the creation of some administrative unit which shall take over both the parks and monuments and administer them under a general appropriation.

National monuments under other departments.—The following national monuments are not administered by the Secretary of the Interior:

National monuments administered by the Department of Agriculture.

Name.	State.	Date.	Area.
Cinder Cone.....	California.....	May 6, 1907	<i>Acres.</i> 1 5, 120
Lassen Peak.....	do.....do.....	do.....do.....	1 1, 280
Gila Cliff dwellings.....	New Mexico.....	Nov. 16, 1907	160
Tonto.....	Arizona.....	Dec. 19, 1907	1 640
Grand Canyon.....	do.....	Jan. 11, 1908	1 806, 400
Jewel Cave.....	South Dakota.....	Feb. 7, 1908	1 1, 280
Wheeler.....	Colorado.....	Dec. 7, 1908	300
Oregon Caves.....	Oregon.....	July 12, 1909	480
Devil Postpile.....	California.....	July 6, 1911	800
Mount Olympus.....	Washington.....	Apr. 17, 1912	1 608, 480

¹ Estimated area.

National monuments administered by the War Department.

Name.	State.	Date.	Area.
Big Hole Battle Field.....	Montana.....	June 23, 1910 ¹	<i>Acres.</i> 5
Cabrillo.....	California.....	Oct. 14, 1913 ²	1

¹ Set aside by Executive order.

² Set aside by presidential proclamation.

PERMITS FOR ARCHÆOLOGICAL EXPLORATION.

The uniform rules and regulations promulgated by the Secretaries of the Interior, Agriculture, and War, under date of December 28, 1906, to carry into effect the general provisions of the act for the preservation of American antiquities provides (par. 3) that—

Permits for the excavation of ruins, the excavation of archæological sites, and the gathering of objects of antiquity will be granted, by the respective Secretaries having jurisdiction, to reputable museums, universities, colleges, or other recognized scientific or educational institutions, or to their duly authorized agents.

On July 11, 1913, a permit was granted by the department to Prof. Byron Cummings, of the University of Utah, to make examinations and excavations as continuation of explorations under a similar permit granted him by the department on June 26, 1912, within the Navajo National Monument, and in the Navajo and Piute Indian Reservations, as well as on lands 30 miles northwest of Bluff, Utah.

On June 18, 1913, another permit was granted by the department to Prof. F. W. Putnam, honorary director of the Peabody Museum, Harvard University, to make examination and excavation of ruins in the Chinlee Valley, west and northwest of Canyon del Muerto, Ariz., on behalf of the Peabody Museum. This locality is in the vicinity of the Navajo National Monument, and approaches the region of Prof. Cummings's explorations.

Applications for permit for continuation of this work during 1914 in the regions indicated have been filed with the department by Profs. Cummings and Putnam.

Permits were issued on October 1, 1912, and July 11, 1913, respectively, to Prof. G. F. Kay, of the State University of Iowa, and Mr. Wm. C. Mills, of the Ohio State Archæological and Historical Society, to remove specimens of silicified wood to an extent not exceeding 500 pounds from the Petrified Forest National Monument in Arizona.

On July 26, 1913, permit was granted Mr. F. W. Hodge, of the Bureau of American Ethnology, Smithsonian Institution, to make a reconnoissance of the Chaco Canyon National Monument in New Mexico, to make photographs of the monument, and to gather collections among its ruins for the benefit of the United States National Museum in Washington.

MUIR WOODS NATIONAL MONUMENT.

On December 31, 1907, the Secretary of the Interior, for and on behalf of the United States, accepted from William Kent and his wife, Elizabeth Thatcher Kent, of Chicago, Ill., in accordance with the act of Congress approved June 8, 1906, entitled "An act for the preservation of American antiquities," a deed conveying to the United States the following-described land, situate in Marin County, Cal.:

Beginning at a stake, A. 7, driven in the center of the road in Redwood Cañon and located by the following courses and distances from the point of commencement of the tract of land, which was conveyed by the Tamalpais Land and Water Company to William Kent by a deed dated August 29th, 1905, and recorded in the office of the county recorder of Marin County, California, Book 95 of Deeds at page 58, to wit: North eighteen degrees thirty-two minutes, east two hundred thirty-two and sixty-four hundredths feet, north sixty-six degrees thirty minutes, west one hundred sixty-seven and thirty-four hundredths feet, north eighty-six degrees twenty-five minutes, west ninety-eight and sixty-two hundredths feet, north seventy degrees no minutes, west two hundred forty-one and seven hundredths feet, north fifty-seven degrees twenty-nine minutes, west one hundred seventy-eight and three-hundredths feet, north forty-six degrees twenty-two minutes, west two hundred thirty-five and thirty-nine hundredths feet, and north twenty-four degrees twenty-five minutes, west two hundred twenty-five and fifty-six hundredths feet; thence from said stake, A. 7, the point of beginning, south fifty-four degrees nineteen minutes, west fourteen hundred eighty-two and seven-tenths feet to Station A. 8, from which Station 4 of the survey of the tract of land conveyed to William Kent as aforesaid bears south fifty-four degrees nineteen minutes, west three hundred ten feet distant; thence from said Station A. 8 north forty-seven degrees thirty minutes, west twenty-six hundred eighty feet; thence due west six hundred fifty and eight-tenths feet; thence north fifty-two degrees thirty minutes, west eleven hundred feet; thence north nineteen degrees forty-five minutes,

west ten hundred fifty-eight and four-tenths feet to Station A. 12, from which Station 16 of the survey of the tract of land conveyed to William Kent as aforesaid bears south eighty-three degrees forty-two minutes, west three hundred ten feet distant; thence north eighty-three degrees forty-two minutes, east thirty-one hundred nine and two-tenths feet; thence north fifty-five degrees twenty-eight minutes, east fifteen hundred fifty feet to an iron bolt, three-quarters of an inch in diameter and thirty inches long, Station 14; thence south seventeen degrees eighteen minutes, east twenty-eight hundred twenty and nine-tenths feet; thence south four degrees ten minutes, east nine hundred thirty feet to a stake, A. 16, driven in the center of a graded road; and thence south forty-five degrees seventeen minutes, west two hundred ninety-eight and five-tenths feet to said stake A. 7, the place of beginning. Containing an area of two hundred ninety-five acres, a little more or less.

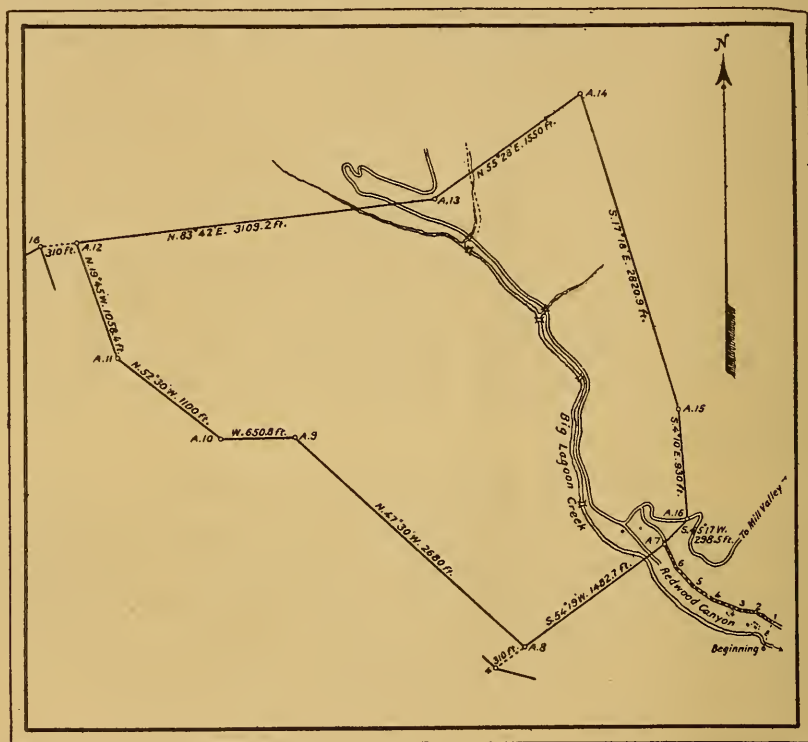


FIG. 3.—Muir Woods National Monument, Cal., in T. 1 N., R. 6 W., Mount Diablo meridian; created January 9, 1908.

On January 9, 1908, the President, by virtue of the power and authority vested in him by section 2 of said act, declared, proclaimed, and set apart the lands described as a "national monument to be known and recognized as Muir Woods National Monument." The Secretary of the Interior had, prior to the date last mentioned, withdrawn the lands from entry or sale.

On September 10, 1908, the department prescribed regulations as follows for the government and protection of said monument:

The following rules and regulations for the government of the Muir Woods National Monument, in the State of California, set side under the provisions of the act of Congress approved June 8, 1906, are hereby established and made public pursuant to the authority conferred by said act:

1. Fires are absolutely prohibited.
2. No firearms allowed.
3. No fishing permitted.

4. Flowers, ferns, or shrubs must not be picked, nor may any damage be done to the trees.
5. Vehicles and horses may be left only at the places designated for this purpose.
6. Lunches may be eaten only at the spots marked out for such use, and all refuse and litter must be placed in the receptacles provided.
7. Pollution of the water in any manner is prohibited. It must be kept clean enough for drinking purposes.
8. No drinking saloon or barroom will be permitted.
9. Persons rendering themselves obnoxious by disorderly conduct or bad behavior, or who may violate any of the foregoing rules, will be summarily removed.

While the sundry civil act approved May 27, 1908 (35 Stat., 317), was pending before Congress attention was called to the fact that no provision was made for the salaries of custodians or for other protection of national monuments, as recommended in the estimates for these services, and that the department would be embarrassed in its efforts to protect monuments from vandalism and unauthorized exploration and spoliation because of a lack of funds. The department had recommended an appropriation of \$5,000 for these purposes. No appropriation, however, was made by Congress for the purpose. On July 11, 1910, Andrew Lind, of California, was appointed custodian of the Muir Woods National Monument, at a salary of \$900 per annum, payable from the appropriation "Protection of public lands and timber," and he is still in charge.

These lands consist of one of the most noted redwood groves in the State of California, and were held in private ownership by Mr. Kent. The tract is of great scientific interest, contains many redwood trees which have grown to a height of 300 feet and have a diameter at the butt of 18 feet or more. It is located in a direct line about 7 miles from San Francisco, Cal., and is in close proximity to a large and growing suburban population.

In Mr. Lind's report for the year he states:

During the fiscal year 1913 the amount of \$972.50 was expended on account of the Muir Woods National Monument, the entire amount being expended in payment for services of the custodian and his assistant. Both have been engaged exclusively in patrolling the park, enforcing the rules and regulations governing national monuments, and in removing fallen trees, branches, etc., from roads and trails. It is estimated that approximately 40,000 people visited the park during the fiscal year 1913.

The roads and trails are in fair condition, with the exception of the main road which, for the most part of it, needs to be filled with gravel. The brush cleaned from the fire lines during June, 1912, was burned without additional expense during the months of January and February, 1913. During the month of June, 1913, Muir Inn, which was situated about one-fourth mile from Muir Woods, was destroyed by fire. Previous to the fire there was a telephone line between Muir Inn and the house occupied by the custodian, the instruments at both ends of the line being owned by the Government. The instrument installed in Muir Inn was destroyed and there is now no telephone connection to Muir Woods.

It is very important that the fire lines be cleaned during the coming fall; the work should be done during the months of November and December, when the brush can be burned as soon as removed from the fire lines.

PETRIFIED FOREST OF ARIZONA.

The Petrified Forest of Arizona lies in the area between the Little Colorado River and the Rio Puerco, 15 miles east of their junction and 6 miles south of Adamana, a station on the Santa Fe Pacific Railroad, from which place it is accessible by horse or vehicle. This area is of great interest because of the abundance of petrified coniferous trees, as well as its scenic features. The trees lie scattered about in great profusion; none, however, stands erect in its original place of growth, as do many of the petrified trees in the Yellowstone

National Park. The trees probably at one time grew beside an inland sea; after falling they became waterlogged, and during decomposition the cell structure of the wood was entirely replaced by silica derived from sandstone in the surrounding land. Over a greater part of the entire area trees lie scattered in all conceivable positions and in fragments of all sizes. Perhaps the most prominent of all the scenic features of the region is the well-known Natural Bridge, consisting

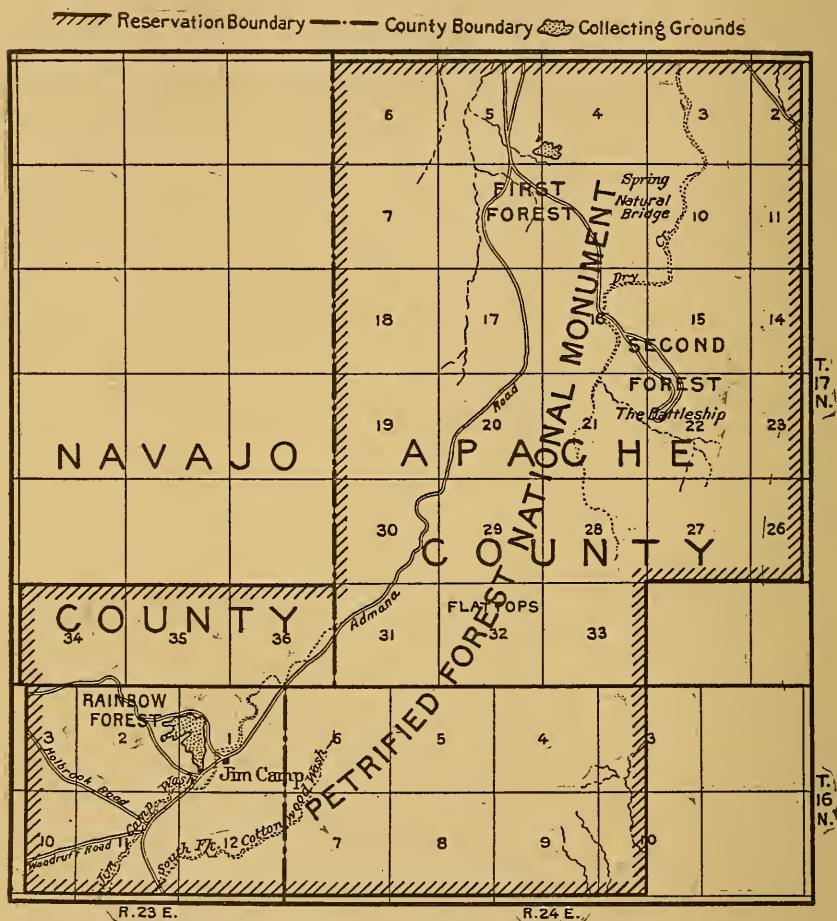


FIG. 4.—Petrified Forest National Monument, Ariz., embracing secs. 1, 2, 11, and 12 and E. $\frac{1}{2}$ secs. 3 and 10; T. 16 N., R. 23 E.; secs. 4 to 9 and W. $\frac{1}{2}$ secs. 3 and 10, T. 16 N., R. 24 E.; secs. 34, 35, 36, T. 17 N., R. 23 E., secs. 3 to 10, 15 to 22, 27 to 33, and W. $\frac{1}{2}$ secs. 2, 11, 14, 23, 26, T. 17 N., R. 24 E., Gila and Salt River meridian, containing 40.04 square miles, set aside by proclamation of the President July 31, 1911.

of a great petrified trunk lying across a canyon 45 feet in width and forming a footbridge over which anyone may easily pass.

Prof. Lester F. Ward, of the Geological Survey, has stated that—

There is no other petrified forest in which the wood assumes so many varied and interesting forms and colors, and it is these that present the chief attraction for the general public. The state of mineralization in which much of this wood exists almost places them among the gems or precious stones. Not only are chalcedony, opals, and agates found among them, but many approach the condition of jasper and onyx. The degree of hardness attained by them is such that they are said to make an excellent quality of emery.

Dr. Walter Hough, of the Smithsonian Institution, who visited this monument, states that—

In the celebrated Petrified Forest, which is some 18 miles from Holbrook, Ariz., on the picturesque Santa Fe Railroad, there are ruins of several ancient Indian villages. These villages are small, in some cases having merely a few houses, but what gives them a peculiar interest is that they were built of logs of beautiful fossil wood. * * * The prehistoric dwellers of the land selected cylinders of uniform size, which were seemingly determined by the carrying strength of a man. It is probable that prehistoric builders never chose more beautiful stones for the construction of their habitations than the trunks of the trees which flourished ages before man appeared on the earth.

This wood agate also furnished material for stone hammers, arrowheads, and knives, which are often found in ruins hundreds of miles from the forest.

NAVAJO NATIONAL MONUMENT.

The Navajo National Monument as originally created by proclamation of March 20, 1909, embraced approximately 600 acres within

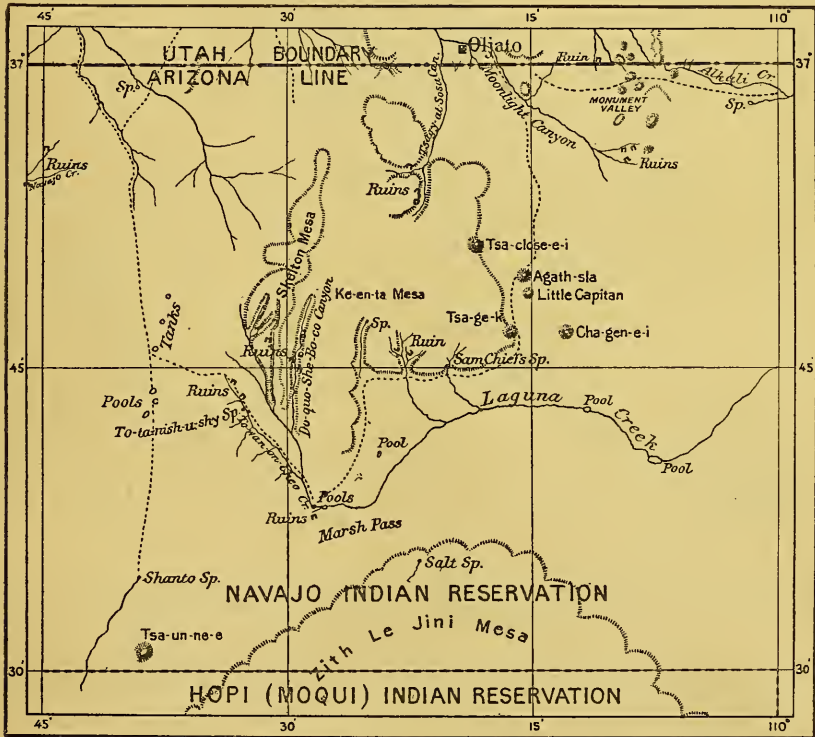


FIG. 5.—Navajo National Monument, Ariz., embracing all cliff-dwelling and pueblo ruins between the parallel of latitude $36^{\circ} 30'$ and 37° north and longitude 110° and $110^{\circ} 45'$ west from Greenwich, with 40 acres of land in square form around each of said ruins; as originally created March 20, 1909.

the Navajo Indian Reservation, which was reserved tentatively and with a view to reduction to such small tract or tracts as might thereafter be found to contain valuable prehistoric pueblo or cliff dwellings, when the extent of the same could be determined by an examination on the ground and their locus definitely fixed by traverse

lines connecting them with some corner of the public survey. Both of these conditions having been fulfilled, the monument was reduced by proclamation dated March 14, 1912, to three small tracts aggregating 360 acres. Within two of these tracts are located, respectively, two interesting and extensive pueblo or cliff-dwelling ruins in a good state of preservation and known as Betata Kin and Keet

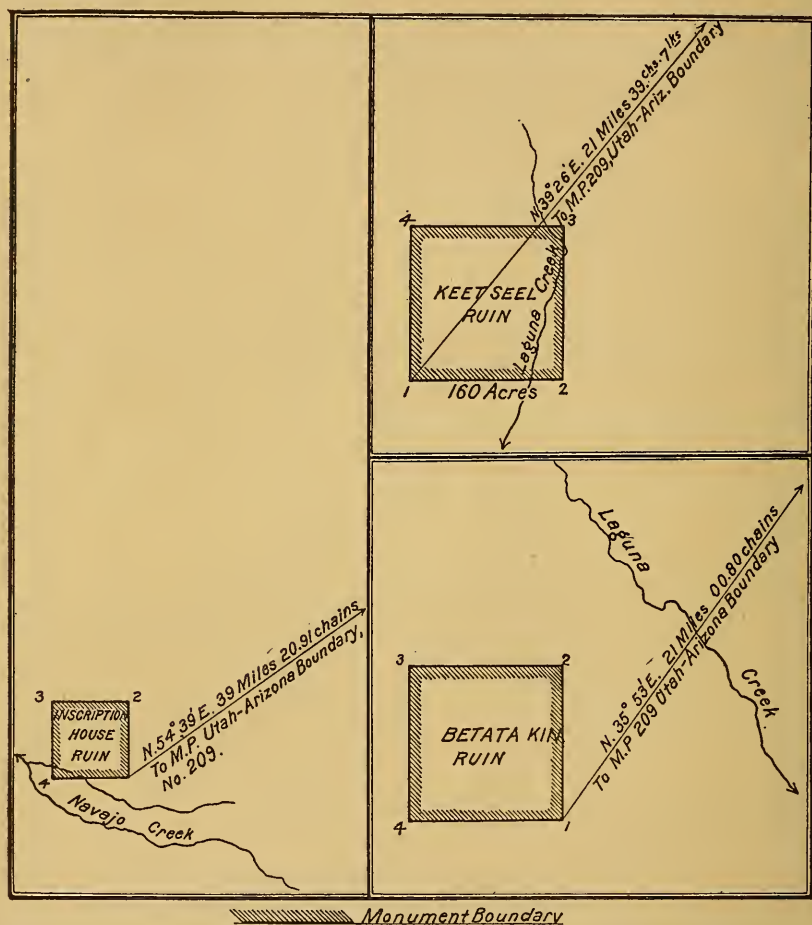


FIG. 6.—Navajo National Monument, Ariz., containing 360 acres, embracing the Keet Seel and Betata Kin ruins, located in two small tracts of 160 acres each, along Laguna Creek, and Inscription House ruins, on Navajo Creek, in a 40-acre tract, all within the Navajo Indian Reservation, as reduced by proclamation of March 14, 1912.

Seel, and a third cliff-dwelling ruin called Inscription House, located on Navajo Creek. Inscription House is regarded as extraordinary, not only because of its good state of preservation but because of the fact that upon the walls of its rooms were found inscriptions written in Spanish by early explorers and plainly dated 1661.

The new boundaries of the Navajo National Monument under the latter proclamation are shown in fig. 6.

CHACO CANYON NATIONAL MONUMENT.

These remarkable relics of an unknown people embrace numerous communal or pueblo dwellings built of stone, among which is the ruin known as Pueblo Bonito, containing, as it originally stood, 1,200 rooms and being the largest prehistoric ruin yet discovered in the Southwest. Numerous other ruins, containing from 50 to 100 or more rooms, are scattered along Chaco Canyon and tributaries for a distance of about 14 miles and upon adjacent territory to the east, south, and west of Chaco Canyon many miles farther. The most important of these ruins are as follows: Pueblo Bonito, Chettro Kettle, Arroyo, New Alto, Old Alto, Kin-Klet Soi, Casa Chiquita, Penasco Blanco, Kin-Kla-tzin, Hungo Pavis, Unda Vidie, Weji-gi, Kim-meni-oli, Kin-yai, Casa Morena, and Pintado.

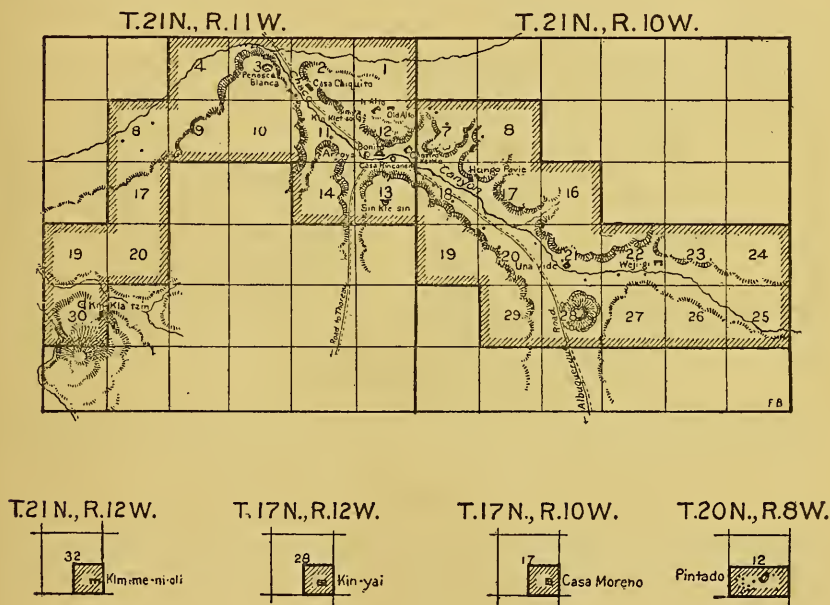


FIG. 7.—Chaco Canyon National Monument, N. Mex., embracing secs. 7 and 8 and 16 to 29, inclusive, T. 21 N., R. 10 W.; secs. 1, 2, 3, 4, and 8 to 14, inclusive, and 17, 19, 20, and 30, T. 21 N., R. 11 W.; S. $\frac{1}{2}$ sec. 12, T. 20 N., R. 8 W.; SE. $\frac{1}{4}$ sec. 32, T. 21 N., R. 12 W.; SE. $\frac{1}{4}$ sec. 28, T. 17 N., R. 12 W.; SE. $\frac{1}{4}$ sec. 17, T. 17 N., R. 10 W.; New Mexico principal meridian; created March 11, 1907.

RAINBOW BRIDGE NATIONAL MONUMENT.

This natural bridge is located within the Navajo Indian Reservation, near the southern boundary of Utah, a few miles northwest from Navajo Mountain, a well-known peak and landmark, and spans a canyon and small stream which drains the northwestern slopes of this peak and is of great scientific interest as an example of eccentric stream erosion. Among the known extraordinary natural bridges of the world, this bridge is unique in that it is not only a symmetrical arch below but presents also a curved surface above, thus presenting roughly, the character of the rainbow, for which it is named. Its

height above the surface of the water is 309 feet and its span is 278 feet.

The existence of this natural wonder was first disclosed to William B. Douglass, an examiner of surveys of the General Land Office, on August 14, 1909, by a Piute Indian, called "Mike's boy," later "Jim," who was employed in connection with the survey of the natural bridges in White Canyon, Utah.

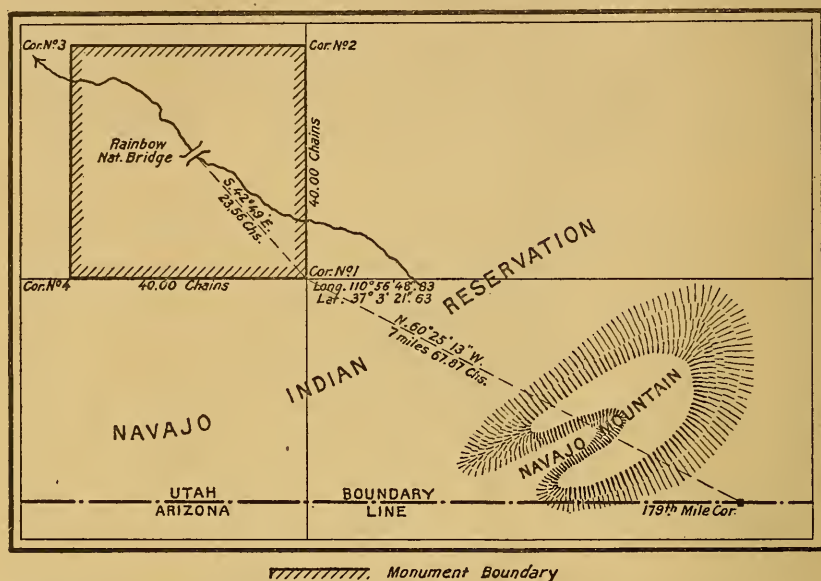


FIG. 8.—Rainbow Bridge National Monument, Utah, embracing 160 acres of land in square form, the southeast corner of which bears from one hundred and seventy-ninth mile corner on the Utah and Arizona boundary N. 60° 25' 13" W. 7 miles 67.87 chains distant; created May 30, 1910.

EL MORRO NATIONAL MONUMENT.

A feature of great historic interest and importance is the so-called El Morro or Inscription Rock, some 35 miles almost due east of Zuni Pueblo in western central New Mexico.

El Morro is an enormous sandstone rock rising a couple of hundred feet out of the plain and eroded in such fantastic forms as to give it the appearance of a great castle, hence its Spanish name. A small spring of water at the rock made it a convenient camping place for the Spanish explorers of the seventeenth and eighteenth centuries, and the smooth face of the "castle" well adapted it to receive the inscriptions of the conquerors of that early period.

The earliest inscription, and historically the most important, is that of Juan de Onate, a colonizer of New Mexico and the founder of the city of Santa Fe, in 1606. It was in this year that Onate visited El Morro and carved this inscription on his return from a trip to the head of the Gulf of California. There are 19 other Spanish inscriptions of almost equal importance, among them that of Don Diego de Vargas, who in 1692, reconquered the Pueblo Indians after their rebellion against Spanish authority in 1680.

It is not too much to say that no rock formation in the West or perhaps in the world is so well adapted to the purpose for which this table of stone was used—at least history does not record any collection of similar data. Here are records covering two centuries, some of which are the only extant memoranda of the early expeditions and explorations of what is now the southwestern part of the United States. On these smooth walls, usually under some projecting stratum, inscriptions were cut by the early conquerors and explorers, which have made this rock one among the most interesting objects on the continent.

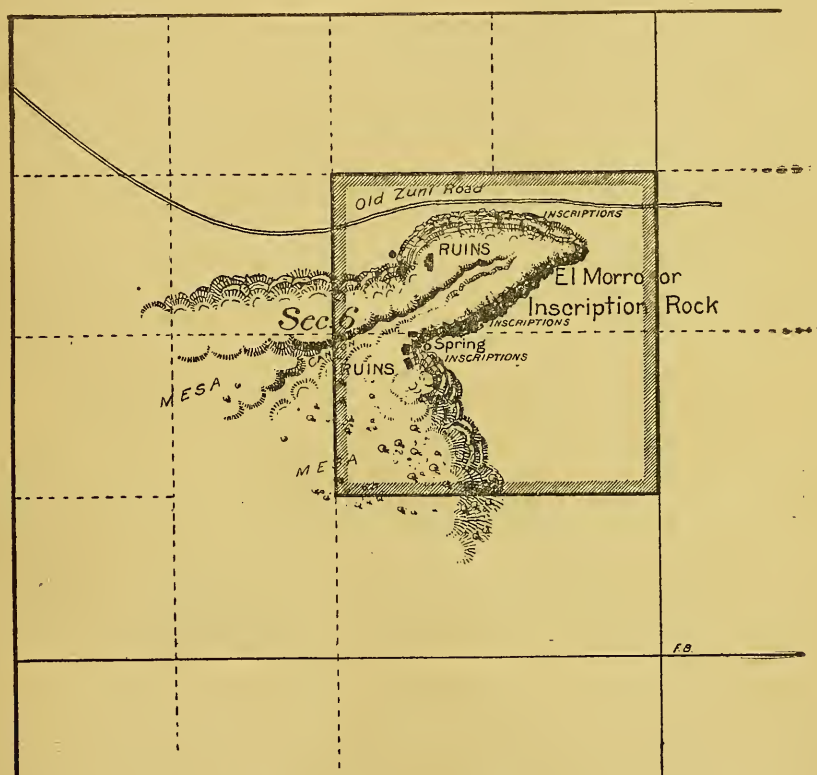


FIG. 9.—El Morro National Monument, N. Mex., embracing the S. $\frac{1}{2}$ NE. $\frac{1}{4}$ and N. $\frac{1}{2}$ SE. $\frac{1}{4}$ sec. 6, T. 9 N. R. 14 W., New Mexico meridian; created December 8, 1906.

Here, in this remote and uninhabited region, in the shadows of one of nature's most unique obelisks, wrapped in the profound silence of the desert, with no living thing to break the stillness, it is hard to realize that 300 years ago these same walls echoed the clank of steel harness and coats of mail; that with the implements of Spanish conquest the pathfinders in the New World were carving historical records upon the eternal rock.

Locally Inscription Rock and El Morro are known as separate and distinct monumental rocks. The latter, translated The Castle, is the rock standing out in bold relief to the east, while Inscription Rock is the name applied to the formation to the west, which is a part of the

mesa. On the south side in the angle formed by the two, one extending east and the other south, is a great chamber or cavern, a natural amphitheater where secure refuge from storm or human foe could easily be secured. It is here, too, that the only spring within many miles wells up as if to make the natural fortification doubly secure. Upon these walls are many of the best preserved Spanish inscriptions, although there are quite a number 200 feet east, under the shadows of a stately pine tree and on the north side of El Morro. Most of them are as plain and apparently as legible as the day they were written; especially is this true of the older ones, carved during the sixteenth and seventeenth centuries.

The existence of extensive, prehistoric ruins on the very summit of Inscription Rock is another feature of interest. On the top of the rock a deep cleft or canyon divides the western end of the formation. On each of these arms is the remnant of large communal houses or pueblos. Some of the walls are yet standing and the ground plans of the structures are well defined. That on the south arm, and almost overhanging the cavern and spring, is approximately 200 by 150 feet. Some of the buildings must have been more than one story in height.

The remarkable natural defenses of the site and the existence of the spring doubtless induced the builders to select this odd location. At some distant day it may be desirable to excavate these ruins and thus add to this historic spot attractions for the scientist as well as the general public who are interested in scenic and natural curiosities.

LEWIS AND CLARK CAVERN NATIONAL MONUMENT.

The feature of this monument is a limestone cavern of great scientific interest, because of its length and because of the number of large vaulted chambers it contains. It is of historic interest, also, because it overlooks for a distance of more than 50 miles the trail of Lewis and Clark along the Jefferson River, named by them. The vaults of the cavern are magnificently decorated with stalactites and stalagmite formations of great variety in size, form, and color, the equal of, if not rivaling, the similar formations in the well-known Luray caves in Virginia.

The cavern is located about 1 mile northeasterly from Limespur, a post office in Jefferson County, and a station on the Northern Pacific Railroad. Its two entrances, which are about 100 yards apart, are upon the walls of a deep canyon about 500 feet below the rim, and the cavern extends back therefrom approximately half a mile. The second proclamation establishing this monument is as follows:

Whereas the unsurveyed tract of land containing an extraordinary limestone cavern and embracing one hundred and sixty acres, situated in township one north, range two west of the Montana principal meridian, Montana, and which was created the Lewis and Clark Cavern National Monument by proclamation dated the 11th day of May, 1908, has recently been definitely located by an official survey thereof, made under the direction of the Commissioner of the General Land Office, and such survey having determined that the tract in question lies wholly within the limits of the grant of the Northern Pacific Railway Company but has not yet been patented to that company;

And whereas, by its quitclaim deed the said Northern Pacific Railway Company relinquished unto the United States all its right, title, and interest to lot twelve, section seventeen, township one north, range two west of the Montana principal meridian, Montana, the same being the original tract proclaimed a national monument, for the purpose of maintaining thereon the said Lewis and Clark Cavern National

Monument, under the condition that the instrument of relinquishment shall become void and the premises immediately revert to the grantor should the monument no longer be maintained.

Now, therefore, I, William H. Taft, President of the United States of America, by virtue of the power in me vested by section two of the act of Congress approved June 8, 1906, entitled "An act for the preservation of American antiquities," do hereby set aside and confirm as the Lewis and Clark Cavern National Monument the said tract, embracing one hundred and sixty acres of land, at and surrounding the limestone cavern in section seventeen, township one north, range two west, Montana, subject to the conditions set forth in the relinquishment and quitclaim deed No. 18129E, dated

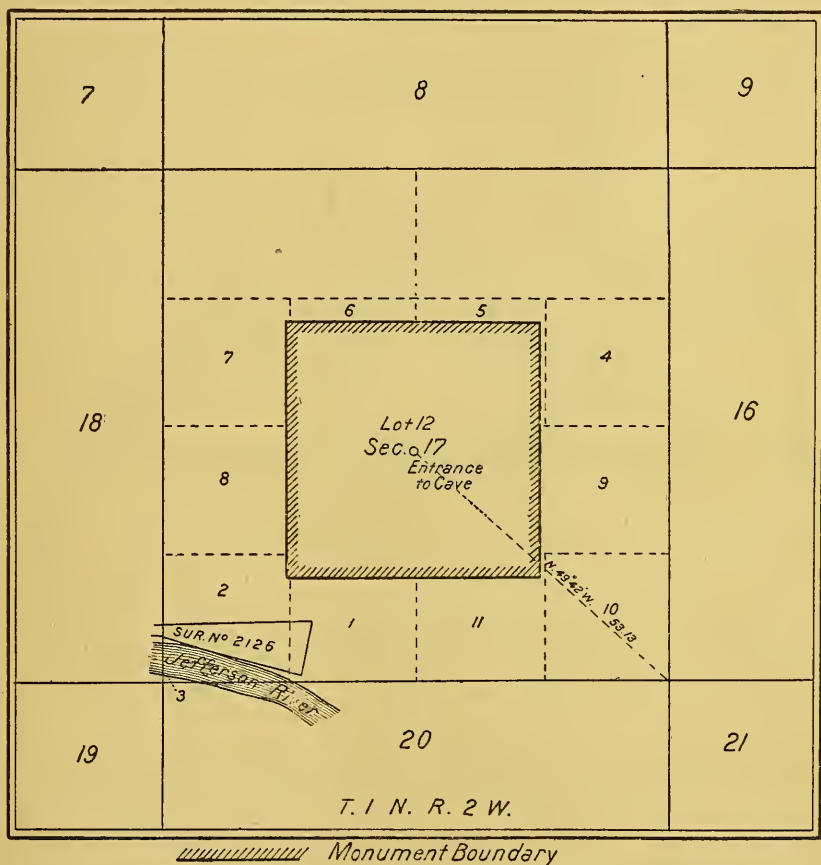


FIG. 10.—Lewis and Clark Cavern National Monument, Mont., embracing lot 12, sec. 17, T. 1 N., R. 2 W.; Montana principal meridian; created by proclamations of May 11, 1908, and May 16, 1911.

February 14, 1911, of the Northern Pacific Railway Company, the said tract being in square form and designated as lot twelve in the survey and deed, with side lines running north and south and all sides equidistant from the main entrance of the said cavern, the center of said entrance bearing north forty-nine degrees, forty-two minutes west, fifty-three and thirteen hundredths chains distant from the corner to sections sixteen, seventeen, twenty, and twenty-one, as shown upon the diagram hereto attached and made a part hereof.

Warning is hereby expressly given to all persons not to appropriate, injure, or destroy any of the natural formations in the cavern hereby declared to be a national monument, nor to locate or settle upon any of the lands reserved and made a part of said monument by this proclamation.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

[SEAL.] Done at the city of Washington this sixteenth day of May, in the year of our Lord one thousand nine hundred and eleven, and of the independence of the United States the one hundred and thirty-fifth.

TUMACACORI NATIONAL MONUMENT.

This monument embraces 10 acres of land in Santa Cruz County, Ariz., relinquished to the United States by a homestead entryman for the purposes specified in the act of June 8, 1906. Upon the tract is

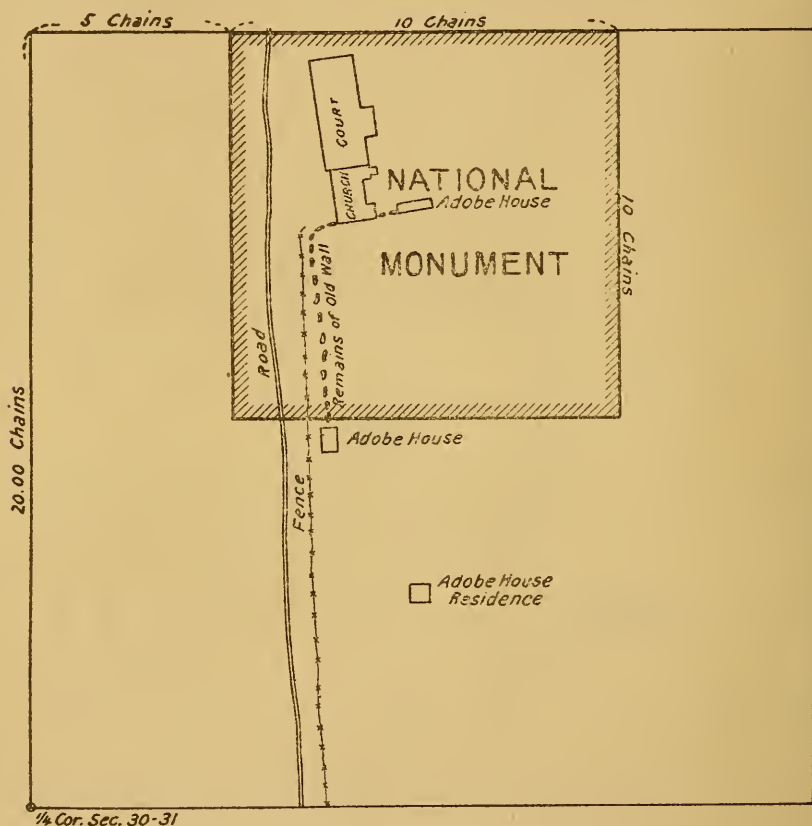


FIG. 11.—Tumacacori National Monument, Ariz., embracing the E. $\frac{1}{2}$ NW. $\frac{1}{4}$ SE. $\frac{1}{4}$ and the W. $\frac{1}{2}$ NE. $\frac{1}{4}$ SW. $\frac{1}{4}$ SE. $\frac{1}{4}$, sec. 30, T. 21 S., R. 13 E., Gila and Salt River meridian; created September 15, 1908.

located a very ancient Spanish mission ruin, erected probably, as appears from the reports, in the latter part of the sixteenth century. The church is in a remarkable state of preservation, owing to the fact that it was erected out of burned bricks and cement mortar. In August of 1913 the department authorized the construction of a substantial fence around the ruin as a means of protection against depredations of cattle and other stock.

MONTEZUMA CASTLE NATIONAL MONUMENT.

This national monument is situated in the northeastern part of Yavapai County, Ariz., and contains an assemblage of cliff dwellings, from the principal of which, known as Montezuma's Castle this monument is named. This structure is of very great interest, not only because of its picturesqueness, but for ethnological and other scientific reasons. It is strictly a cliff dwelling, with the added importance that it is also a communal house. Although very small as compared with the great ruins of Chaco Canyon, Canyon de Chelly,



FIG. 12.—Montezuma Castle National Monument, Ariz., embracing the NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 16, the N. $\frac{1}{4}$ NE. $\frac{1}{4}$ and NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 17, T. 14 N., R. 5 E., Gila and Salt River meridian; created December 8, 1906.

Mesa Verde, the Mancos, and other localities of the Southwest, it is so unique in location and structural design, and so perfectly preserved, that it may be said to have no equal in the United States.

The character of the material used in the Verde cliff ruins, adobe, rubble, and a soft calcareous stone, rendered the progress of disintegration and ruin somewhat rapid, though many centuries must have elapsed since the passing of the race. The Mojave Apache Indians, who occupied the valley at the advent of the white men, have no tradition respecting the existence of the people who formerly occupied this region. Montezuma's Castle, it is stated, is the only single perfect specimen and type of the architectural skill of the prehistoric cliff dwellers of this valley.

NATURAL BRIDGES NATIONAL MONUMENT.

This monument is located in the vicinity of Bluff, San Juan County, in the extreme southeastern portion of Utah, and was created, originally, by presidential proclamation of April 16, 1908.

A second proclamation, issued by the President September 25, 1909, includes, besides the three bridges originally reserved, a much more extended territory, but within which, along the walls of the canyons in the vicinity of the bridges, are found many prehistoric ruins of

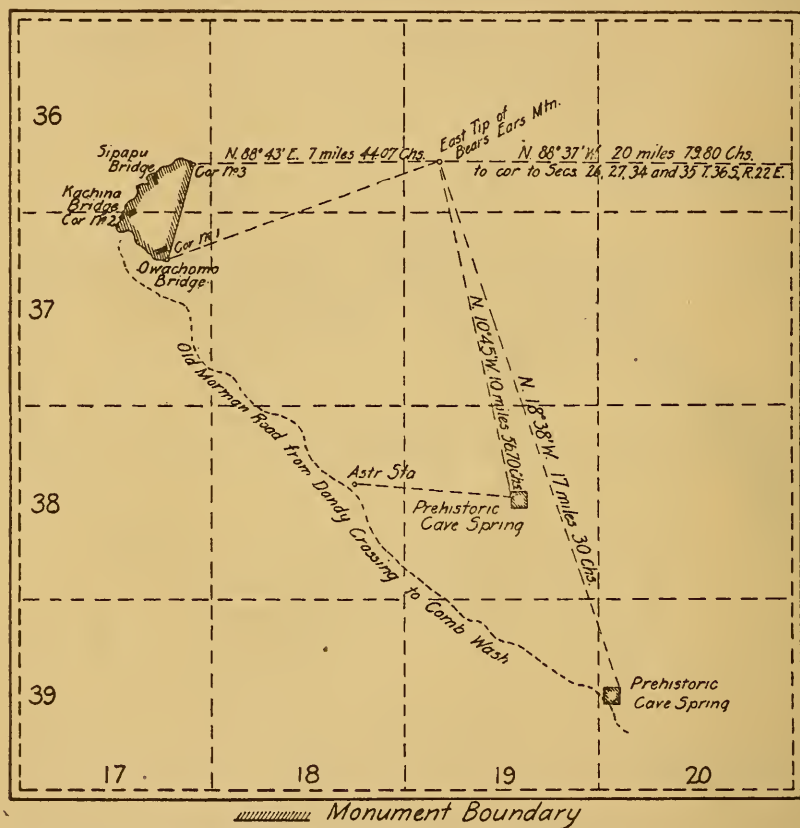


FIG. 13.—Natural Bridges National Monument, Utah, embracing a subtriangular tract in unsurveyed Tps. 36 and 37 S., R. 17 E., and two smaller tracts, one each in T. 38 S., R. 19 E., and T. 39 S., R. 20 E., Salt Lake meridian; created September 25, 1909.

cavern and cliff dwellings. There are also two cavern springs containing some prehistoric ruins, which are located approximately 13 and 19 miles southeast of the bridges, respectively. These cavern springs are included within the Natural Bridges Monument. They are located upon the ancient and only trail to the bridges from the south, and are important way stations in the desert surrounding this monument.

The monument is reached by a two days' horseback journey from Bluff. The natural bridges spring from the high walls of White Canyon, through which part of the journey is taken, and are the

result of remarkable and eccentric stream erosion. These bridges are understood to be among the largest examples of their kind, the greatest of the three having a height of 222 feet, being 65 feet thick at the top of the arch. The arch is 28 feet wide, the span is 261 feet, and the height of span 157 feet. The other two bridges are only a little smaller. All three are within a space of about 5 miles.

GRAN QUIVIRA NATIONAL MONUMENT.

The Gran Quivira has long been recognized as one of the most important of the earliest Spanish church or mission ruins in the

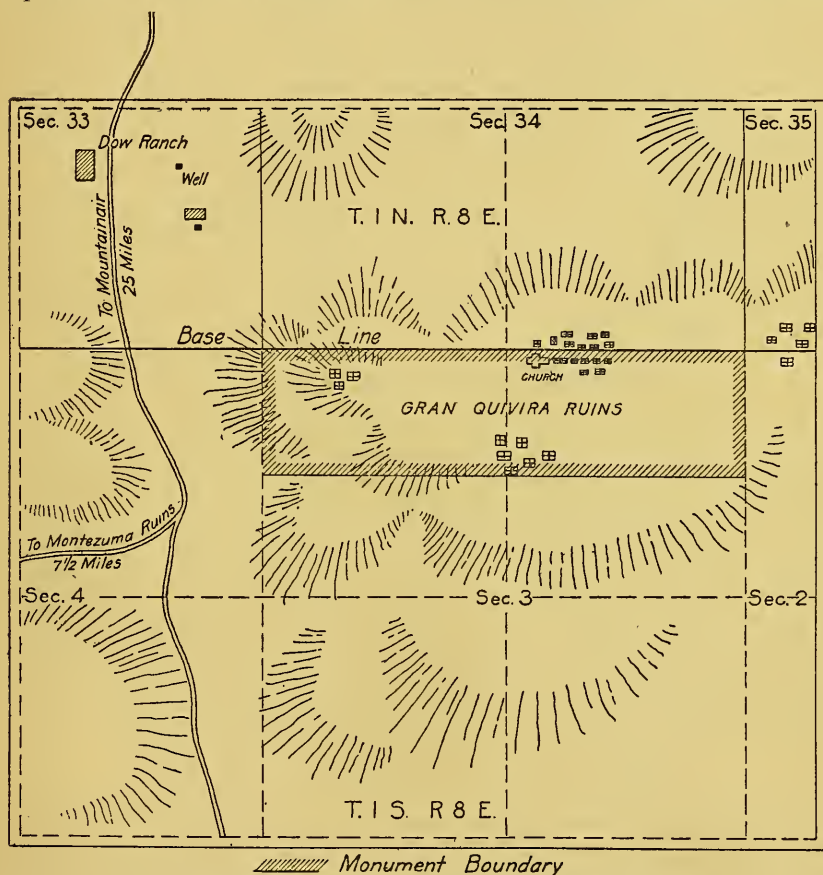


FIG. 14.—Gran Quivira National Monument, N. Mex., embracing unsurveyed N. $\frac{1}{2}$ of N. $\frac{1}{2}$ sec. 3, T. 1 S., R. 8 E., New Mexico principal meridian; created November 1, 1909.

Southwest. Near by are numerous Indian pueblo ruins, occupying an area many acres in extent, which also, with sufficient land to protect them, was reserved. The outside dimensions of the church ruin, which is in the form of a short-arm cross, are about 48 by 140 feet, and its walls are from 4 to 6 feet thick and from 12 to 20 feet high.

The Gran Quivira National Monument is located $1\frac{1}{2}$ miles outside of the exterior boundaries of the Manzano National Forest, and is remote from the headquarters of any officer of this department.

On September 12, 1910, the Interior Department requested the Department of Agriculture to assume temporary charge of patrol and protection of this monument, in view of the better facilities at disposal of the Forest Service in the Manzano National Forest, inasmuch as the monument is remote from location of any field officer of the Interior Department; and this charge was accepted by the Department of Agriculture.

MUKUNTUWEAP NATIONAL MONUMENT.

The Mukuntuweap National Monument, Utah, embraces the magnificent gorge of Zion Creek, called the Mukuntuweap Canyon by the Powell Topographic Survey of southwestern Utah, Kanab sheet, and the same is of the greatest scientific interest. The canyon walls are smooth, vertical sandstone precipices, from 800 to 2,000 feet deep. These walls are unscalable within the limits of the boundaries of the reserve, except at one point about 4 miles from the southern and 6 miles from the northern extremity. The North Fork of the Rio Virgin passes through the canyon, and it is stated that the views into the canyon from its rim are exceeded in beauty and grandeur only by the similar views into the Grand Canyon of the Colorado.

At intervals along the west wall of the canyon are watercourses which cross the rim and plunge into the gorge in waterfalls 800 to 2,000 feet high.

SHOSHONE CAVERN NATIONAL MONUMENT.

The Shoshone Cavern National Monument embraces 210 acres of rough, mountainous land. The cavern entrance is located upon the north face of Cedar Mountain, about 3 miles east of the great Shoshone Dam in Big Horn County, Wyo. From its entrance the cavern runs in a southwesterly direction for more than 800 feet, if measured in a direct line. The route which must be traveled to reach this depth within the mountain, however, is so winding and irregular that at least a mile is passed before the terminus is reached.

There are en route many dark pits and precipices of unknown depth and therefore of a special interest. The various chambers and passages are beautifully decorated with a sparkling crust of limestone crystals and from the roof hang myriads of stalactites.

SITKA NATIONAL MONUMENT, ALASKA.

This monument reservation, created March 23, 1910, under the act of June 8, 1906, embraces about 57 acres of comparatively level gravel plain formed by sea wash and by the deposits of Indian River, which flows through the tract. Upon this ground was located formerly the village of a warlike tribe—the Kik-Siti Indians—who, in 1802, massacred the Russians in old Sitka and thereafter fortified themselves and defended their village against the Russians under Baranoff and Lisianski. Here also are the graves of a Russian midshipman and six sailors, who were killed in a decisive battle in 1804. A celebrated "witch tree" of the natives and 16 totem poles, several of which are examples of the best work of the savage genealogists of the Alaska clans, stand sentrylike along the beach.

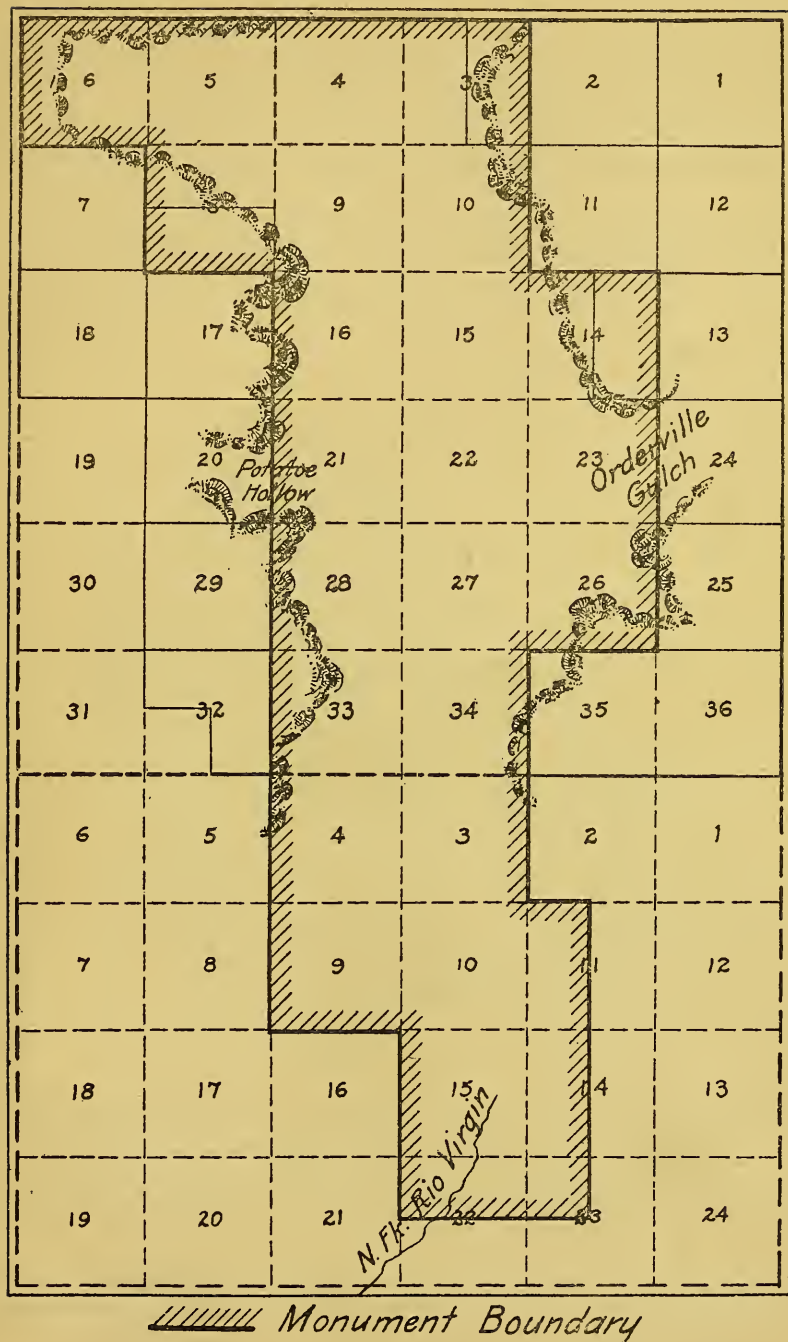


FIG. 15.—Mukuntuweap National Monument, Utah, embracing secs. 3, 4, 5, 6, 8, 9, 10, 14, 15, 16, 21, 22, 23, 26, 27, 28, 33, and 34, T. 40 S., R. 10 W., and all of the Mukuntuweap Canyon in T. 41 S., R. 10 W., Salt Lake meridian; created July 31, 1909.

An estimate in the sum of \$1,500 has been submitted by the department to Congress for protection and improvement during the fiscal year 1915 of this monument, including the repair of the ancient totems and other historic relics.

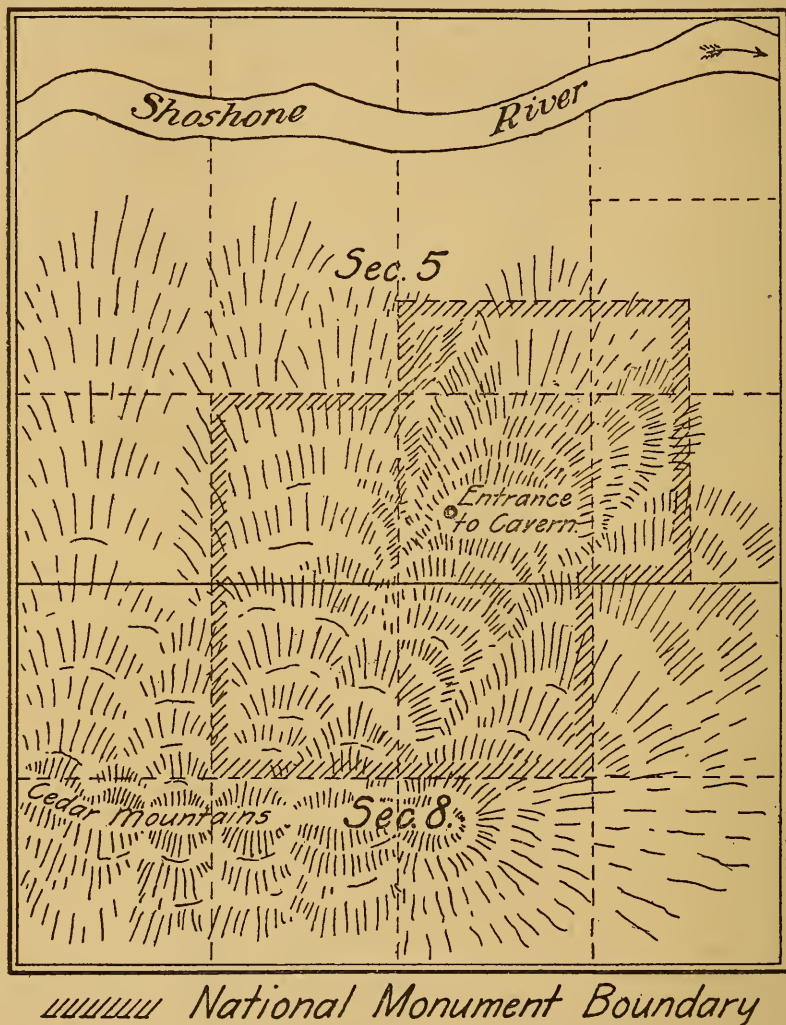


FIG. 16.—Shoshone Cavern National Monument, Wyo., embracing the SW. $\frac{1}{4}$ SE. $\frac{1}{4}$; W. $\frac{1}{4}$ SE. $\frac{1}{4}$ SE. $\frac{1}{4}$; SW. $\frac{1}{4}$ NE. $\frac{1}{4}$ SE. $\frac{1}{4}$; S. $\frac{1}{4}$ NW. $\frac{1}{4}$ SE. $\frac{1}{4}$; and SE. $\frac{1}{4}$ SW. $\frac{1}{4}$, sec. 5; the NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ and NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 8, T. 52 N., R. 102 W., sixth principal meridian; created September 21, 1909.

The following is from a letter dated August 31, 1913, from Arthur G. Shoup, member of Alaskan Legislature, to J. W. Lewis, special agent, General Land Office, and now part of General Land Office files:

The great natural beauty of this park is extolled by every tourist who has ever visited Sitka, and it is partly on account of the exceptional opportunities that it affords for visitors from the States to see at once the timber growth, wild mosses, and small

verdure, and mountain streams of Alaska that our Government has so carefully guarded this reservation.

Referring briefly to the historical features of the Sitka National Monument, or Indian River Park as it is called: It was here that the Russians under Baranoff in 1802 fought and won the "decisive battle of Alaska" against the Indians, and effected their lodgment in southeastern Alaska that placated the then very active attempts of Great Britain to get possession of this part of the country. The Russian title thus acquired to the Alexander Archipelago was later transferred to the United States, and because of this battleground being in the Sitka National Monument, it is of great patriotic interest to every Alaskan.

Another interesting feature of this park is that it is the place where the natives used to conduct their weird trials and executions for witchcraft. The tree where the victims were hanged still stands as an object of awe to the descendants of the old schamen, and a subject of curiosity to the whites.

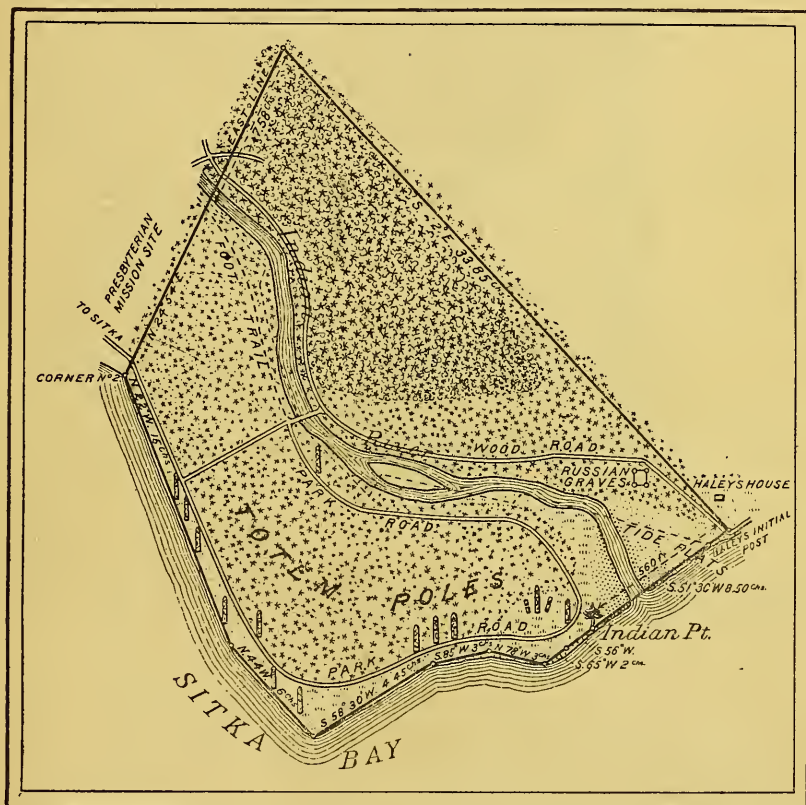


FIG. 17.—Sitka National Monument, Alaska, embracing a tract of land which includes the mouth of Indian River and adjacent territory near Sitka; created March 23, 1910.

DEVILS TOWER NATIONAL MONUMENT.

This extraordinary, natural monument has been known and utilized, doubtless, from time immemorial by the aborigines of the plains and mountains, for the American Indian of the last century was found to be directing his course to and from the hunt and foray by reference to this lofty pile. In their turn the white pioneers of civilization in their explorations of the great Northwest which began

with the expedition of the Verendryes, pathfinders of the French colonies of Canada, in 1742, utilized the tower as a landmark, and still later the military expeditions into the Sioux and Crow Indian country during the Indian wars of the last century carried on operations within sight of the Devils Tower or directed their march by the aid of its ever-present beacon, for the tower is visible in some directions in that practically cloudless region for nearly 100 miles.

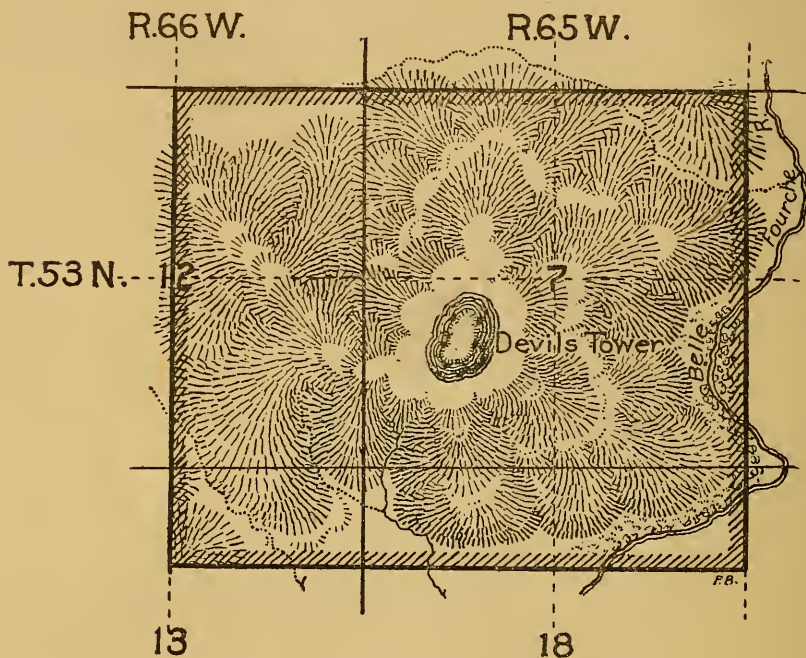


FIG. 18.—Devils Tower National Monument, Wyo., embracing sec. 7 and the N. $\frac{1}{2}$ NE. $\frac{1}{4}$, the NE. $\frac{1}{4}$ NW. $\frac{1}{4}$, and lot No. 1, sec. 18, T. 53 N., R. 65 W.; the E. $\frac{1}{2}$ sec. 12 and the N. $\frac{1}{2}$ NE. $\frac{1}{4}$ sec. 13, T. 53 N., R. 66 W., sixth principal meridian; created September 24, 1906.

PINNACLES NATIONAL MONUMENT.

There are two groups of the so-called Pinnacles Rocks, known locally as the Big Pinnacles and the Little Pinnacles. The general characteristics of the two groups are similar. Each covers an area of about 160 acres, very irregular in outline.

The name is derived from the spirelike formations rising from 600 to 1,000 feet from the floor of the canyon, forming a landmark visible many miles in every direction. Many of the rocks are so precipitous that they can not be scaled. A series of caves, opening one into the other, lie under each of the groups of rock. These caves vary greatly in size, one in particular, known as the Banquet Hall, being about 100 feet square with a ceiling 30 feet high. The caves are entered through narrow canyons, with perpendicular rock walls and overhanging boulders. One huge stone, called the Temple Rock, is almost cubical in form. It stands alone in the bottom of the canyon and its walls rise perpendicularly to a height of over 200 feet.

There are also several specimens of "balancing rocks" in each of the groups.

The railroad station nearest this monument is Soledad, Monterey County, Cal.

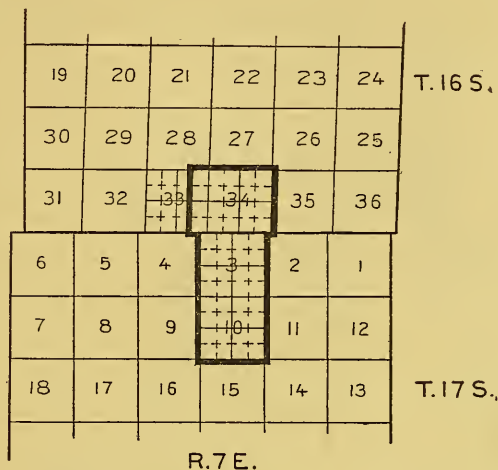


FIG. 19.—Pinnacles National Monument, Cal.; embraces parts of Tps. 16 and 17 S., R. 7 E., M. D. M.; created January 16, 1908.

COLORADO NATIONAL MONUMENT.

This area was set aside as a national monument by the President's proclamation of May 24, 1911, and is situated near Grand Junction, Colo. The site is in a picturesque canyon, which has long been an attractive feature of that portion of the State. The formation is similar to that of the Garden of the Gods at Colorado Springs, Colo., only much more beautiful and picturesque. With the exception of the Grand Canyon of the Colorado it exhibits probably as highly colored, magnificent, and impressive examples of erosion, particularly of lofty monoliths, as may be found anywhere in the West. These monoliths are located in several tributary canyons. Some of them are of gigantic size, one being over 400 feet high, almost circular in cross section, and 100 feet in diameter at base.

CINDER CONE NATIONAL MONUMENT.

The Cinder Cone National Monument was created by proclamation dated May 6, 1907. It is situated within the Lassen Peak National Forest, and with the adjacent area, embracing a lava field and Snag Lake and Lake Bidwell, is of scientific interest as illustrative of volcanic activity, and is of special importance in tracing the history of the volcanic phenomena of that vicinity.

LASSEN PEAK NATIONAL MONUMENT.

The Lassen Peak National Monument was created by proclamation dated May 6, 1907. It is situated within the Lassen Peak National Forest and marks the southern terminus of the long line of extinct

volcanoes in the Cascade Range, from which one of the greatest volcanic fields in the world extends, and is of special importance in tracing the history of the volcanic phenomena of that vicinity.

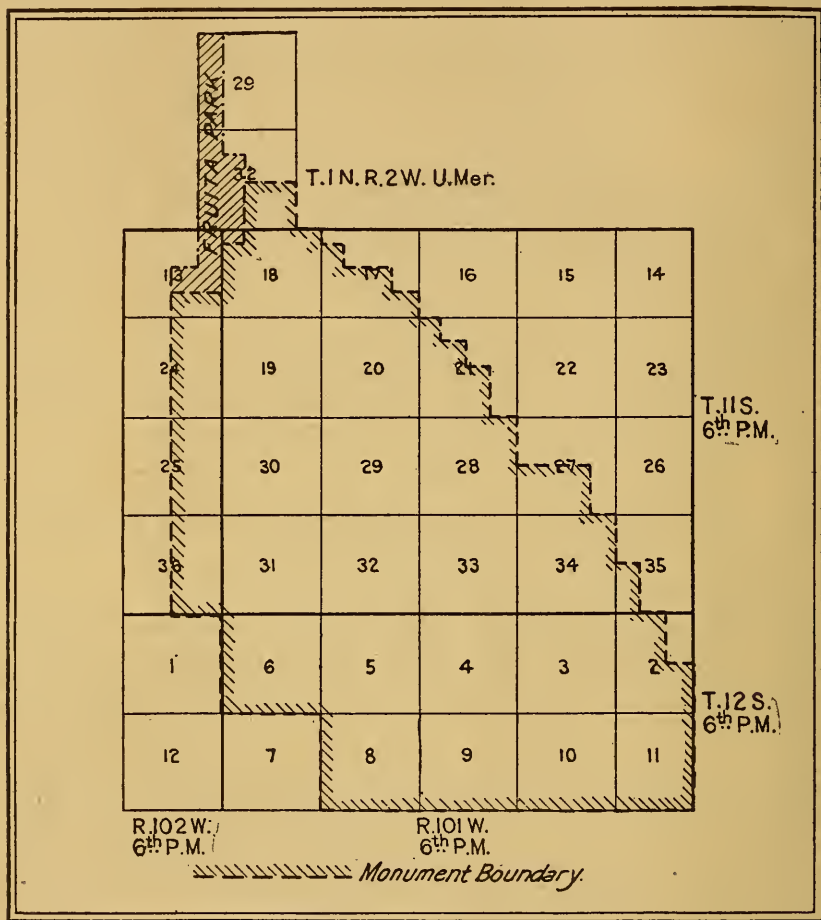


FIG. 20.—Colorado National Monument, Colo., embracing parts of Tps. 11 and 12 S., Rs. 101 and 102 W. of the sixth principal meridian, and part of sec. 32, T. 1 N., R. 2 W. of the Ute meridian, Colorado, containing 13,833.06 acres; created May 24, 1911.

GILA CLIFF-DWELLINGS NATIONAL MONUMENT.

The Gila Cliff-Dwellings National Monument was created by proclamation dated November 16, 1907. These cliff-dweller ruins are neither very large nor very important, but are located in a district in which few prehistoric ruins are found.

TONTO NATIONAL MONUMENT.

The Tonto National Monument was created by proclamation dated December 19, 1907. It is located in Gila County, Ariz., and embraces two prehistoric ruins of cliff dwellings located somewhat

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

FIG. 21.—Cinder Cone National Monument, within Lassen Peak National Forest, Cal., embracing part of T. 31 N., R. 6 E., M. D. M.; created May 6, 1907.

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

FIG. 22.—Lassen Peak National Monument, within Lassen Peak National Forest, Cal., embracing part of T. 31 N., R. 4 E., M. D. M.; created May 6, 1907.

less than 2 miles south of the Salt River Reservoir constructed by the Reclamation Service in the valley of the Salt River within the Tonto Basin, and is about 5 miles southeasterly from the town of Roosevelt. The prehistoric ruin is situated in the high, flaring entrance to a large, shallow cavern, is three stories high, approximately 60 feet wide and 30 feet deep, and contains 14 or more rooms.



FIG. 23.—Gila Cliff-Dwellings National Monument, within Gila National Forest, N. Mex., embracing NE. $\frac{1}{4}$ of sec. 27, T. 12 S., R. 14 W., New Mexico meridian; created Nov. 16, 1907.

GRAND CANYON NATIONAL MONUMENT, ARIZ.

A considerable portion of the area set aside by the proclamation creating this national monument is covered by three different proclamations, one of which created the Grand Canyon Forest Reserve, one the game preserve embracing that part of the national forest north of the river, and the third the monument proclamation. It is believed that the most wonderful portion of the canyon is contained within the present limits of the national monument and game preserves.

Steps were taken to create a national park of the Grand Canyon of the Arizona, and a bill (H. R. 6331) providing for such purpose

was introduced in Congress April 20, 1911. The bill, however, did not become a law. The Association of American Geographers has recommended that the above-mentioned park be designated as Powell National Park, and the Geological Society of America has approved the naming of the national park in the Grand Canyon of the Colorado after its explorer, Maj. J. W. Powell.

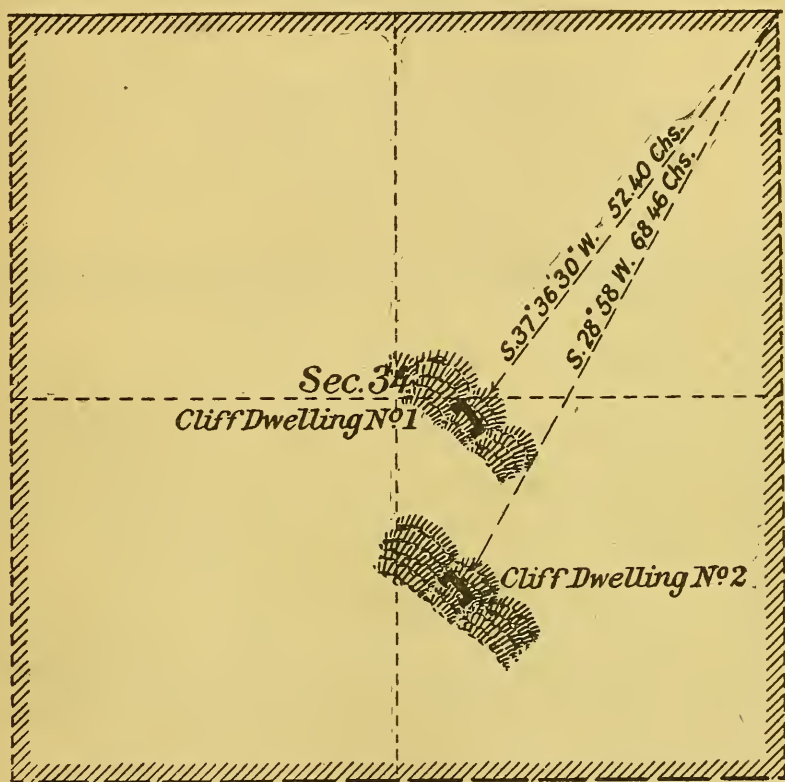


FIG. 24.—Tonto National Monument, unsurveyed sec. 34, T. 4 N., R. 12 E., Gila and Salt River meridian, Ariz., containing 640 acres; created December 19, 1907.

JEWEL CAVE NATIONAL MONUMENT.

Jewel Cave, which is located 13 miles west and south of Custer, the county seat of Custer County, S. Dak., was discovered on August 18, 1900, by two prospectors, Albert and F. W. Michaud, whose attention was attracted by the noise of wind coming from a small hole in the limestone cliffs on the east side of Hell Canyon. In the hope of discovering some valuable mineral and the source of the wind, these men, in company with one Charles Bush, enlarged the opening. Jasper and manganese are found in the cave, but to what extent is not definitely known.

The prospectors have followed the main descending wind passage for a distance of $1\frac{1}{2}$ miles, which point the explorers believe to be from 600 to 700 feet below the entrance, and have explored numerous

side galleries and passages. However, the cave is far from being fully explored.

The cave, as far as known, is located in limestone formation and is apparently the result of action of water. A prominent geologist who

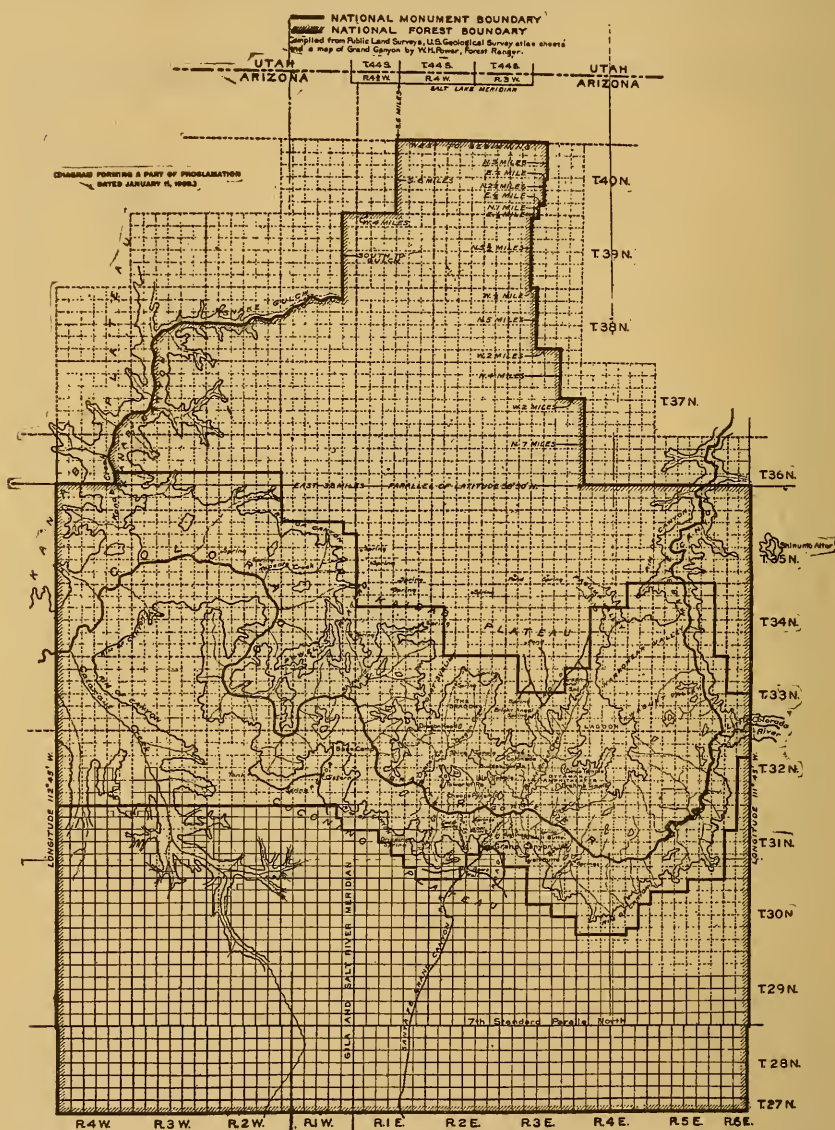


FIG. 25.—Grand Canyon National Monument, within Grand Canyon National Forest, Ariz.; created January 11, 1908.

visited this cave believes it to be an extinct geyser channel. The cave, as far as explored, consists of a series of chambers, connected by narrow passages with numerous side galleries, which increase in size as the distance from the entrance becomes greater.

The explorers have been careful observers of the action of the wind within the cave. They have discovered that ordinarily the wind blows in and out of the cave for regular periods, the periods of blowing in and out being 15 hours each, although they have known the periods to be of 72 hours' duration. Other wind passages have been discovered in the vicinity of the cave.

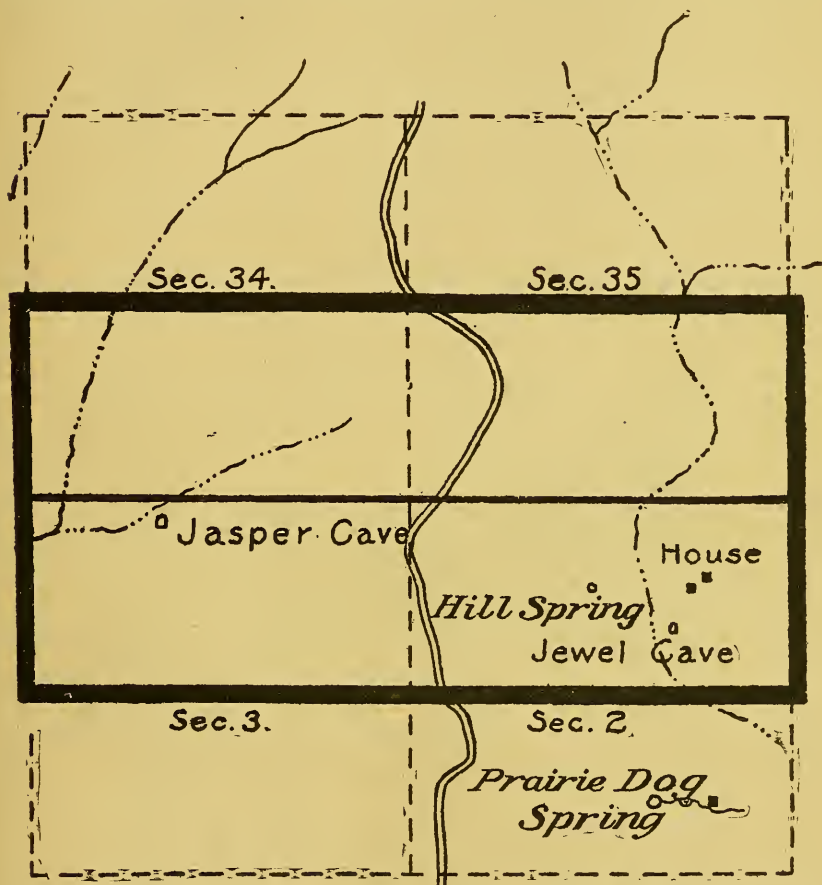


FIG. 26.—Jewel Cave National Monument, within Black Hills National Forest, S. Dak., Tps. 3 and 4 S., R. 2 E., Black Hills meridian; created Feb. 7, 1908.

WHEELER NATIONAL MONUMENT, COLO.

The lands embraced in this national monument are situated near the headwaters of the middle fork of Bellows Creek, a northern tributary of the Rio Grande del Norte, about 10 miles northeast of Wagon Wheel Gap, Colo., and 2 miles south of the crest of the Continental Divide.

The tract lies on the southern slope of the ridge which forms the crest of the Continental Divide. It is traversed from north to south by numerous deep canyons with very precipitous sides, the intervening ridges being capped by pinnacle like rocks, making it practically impossible to cross the tract from east to west, even on foot.

There are also many crevices cutting the ridges transversely, making an intricate network of ravines separated by broken, precipitous ledges and broken mesas.

It is probable that the formation found here is the result of a succession of outpourings of lava and showers of volcanic ash which have left a series of nearly horizontal strata of varying degrees of hardness. Numerous pebbles and breccia of a flint-like rock are embedded in the softer lavas which were probably gathered up by the flowing lava mud from the original bedrock. The formation is for

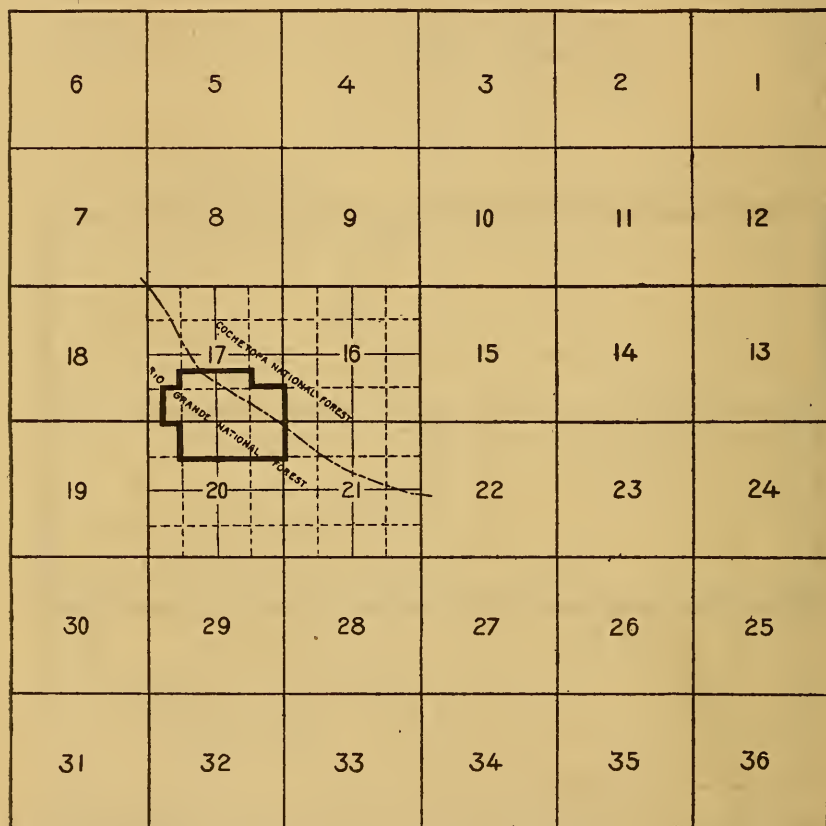


FIG. 27.—Wheeler National Monument, within Cochetopa and Río Grande National Forests, Colo., T. 42 N., R. 2 E., New Mexico meridian; created Dec. 7, 1903.

the most part scoriaceous tufa and trachyte, with some rhyolite. The effect of erosion on this formation has been to cut it into sharply defined forms of many kinds. The harder broken rocks embedded in the lavas have acted as veritable chisels, greatly accelerating erosive action and making the lines and angles more sharply defined than would be the case in ordinary weathering. This erosion is still going on at a remarkably rapid rate, making the place very interesting from the geological point of view.

The fantastic forms resulting from the rapid erosion make this spot one of exceptional beauty. The numerous winding canyons,

broken ridges, pinnacles, and buttes form such striking and varied scenes that it will be much visited by tourists when it has been made accessible by the construction of roads and trails.

From the most reliable data it is believed that the ill-fated expedition of John C. Fremont, in 1848, reached this immediate vicinity, when disaster came upon the party, compelling it to turn back. Skeletons of mules, bits of harness, and camp equipage are found here, lending force to the recorded data.

MOUNT OLYMPUS NATIONAL MONUMENT, WASH.

This monument was set aside by presidential proclamation of March 2, 1909, and contained approximately 608,640 acres. It was created for the purpose of preserving many objects of great and unusual scientific interest, embracing numerous glaciers, and the territory has also been from time immemorial the summer range and breeding ground of the Olympic elk, a species which is rapidly decreasing in numbers. A bill was introduced in Congress on July 15, 1911, providing for the setting aside as a national park the same tract of land as was set aside by proclamation of the President creating the Mount Olympus National Monument.

It was reduced by presidential proclamation of April 17, 1912, to 608,480 acres in order to permit certain claimants to land therein to secure title to the land. This proclamation providing therefor is as follows:

I, WILLIAM H. TAFT, President of the United States of America, by virtue of the power in me vested by section 2 of the act of Congress approved June 2, 1906, entitled "An act for the preservation of American antiquities," do hereby declare and proclaim that the south half of the southwest quarter of section twenty-one, and the north half of the northwest quarter of section twenty-eight, in township twenty-four north, range eight west, Willamette meridian, Washington, be, and the same are hereby, eliminated from the Mount Olympus National Monument. The provisions of the proclamation of March 2, 1909, shall remain in full force and effect as to all other lands thereby reserved as a national monument.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this seventeenth day of April, in the year [SEAL.] of our Lord one thousand nine hundred and twelve, and of the Independence of the United States the one hundred and thirty-sixth.

OREGON CAVES NATIONAL MONUMENT, OREG.

The Oregon Caves or "Marble Halls" of Josephine County, discovered in 1874, are located in the Siskiyou National Forest, about 30 miles south of Grants Pass in Cave Mountain, a peak of the Greyback Range, that divides the headwaters of the Applegate and Illinois Rivers, and connects with the Siskiyou Mountains near the north line of California.

Cave Mountain, the peak which contains these caves, rises to an elevation of about 6,000 feet, and is of limestone formation. The main openings around which the national monument has been created are at an elevation of 4,000 feet, but the entire mountain side for 5 or 6 miles shows caverns of various sizes, and in all probability throughout its interior is honeycombed like the portion that has been explored.

These caves are more of a series of galleries than of roomy caverns, though many beautiful rooms have been discovered, while miles of

galleries have been visited; but there are thousands of passageways leading in all directions—partly closed by stalactites—that have

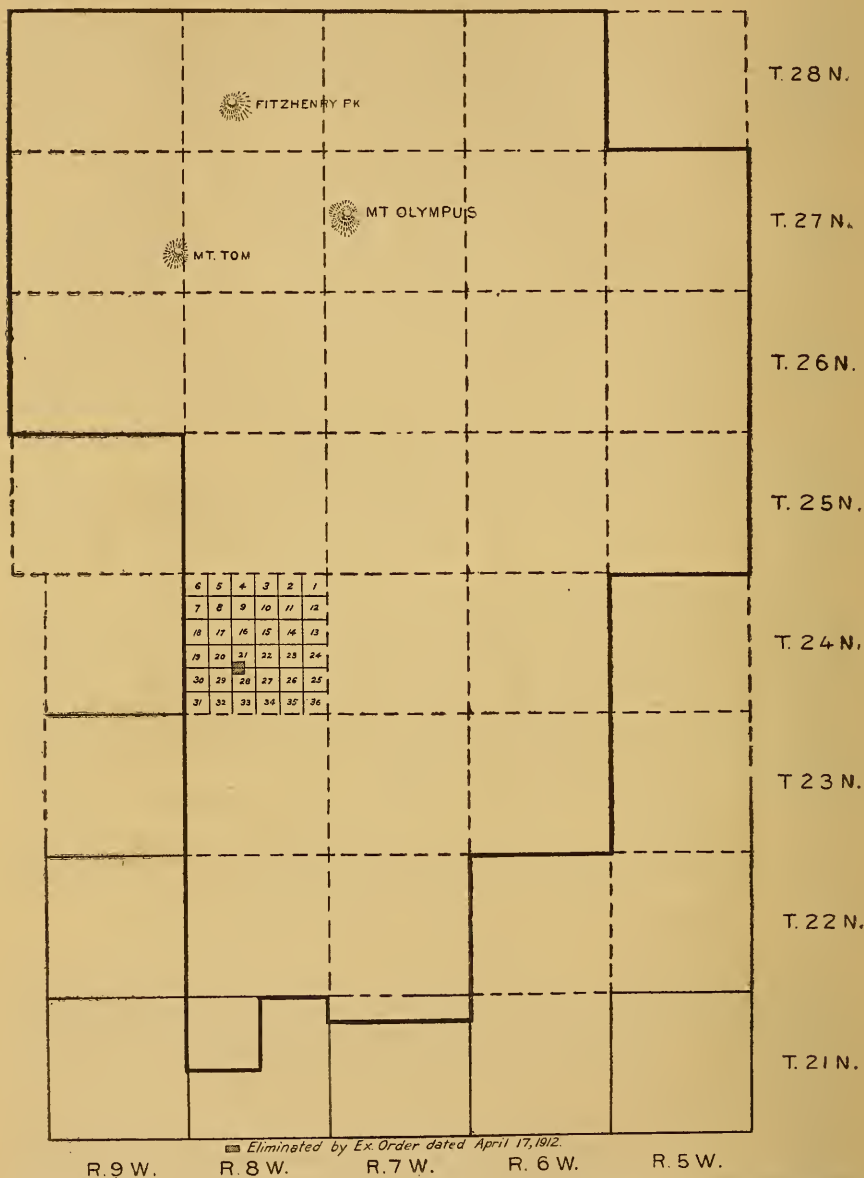


FIG. 28.—Mount Olympus National Monument, within Olympic National Forest, Wash.; created March 2, 1909; elimination of April 17, 1912.

never been opened, and with the distant and unexplored openings on the opposite side of the mountain the magnitude of the Oregon Caves can be said to be practically unknown.

Many small streams are found at different elevations, and larger bodies of running water can be heard in pits bottomless so far as measured (by 300-foot line). This running water probably accounts for currents of wind that in some of the galleries blow so hard as to extinguish an open light at once.

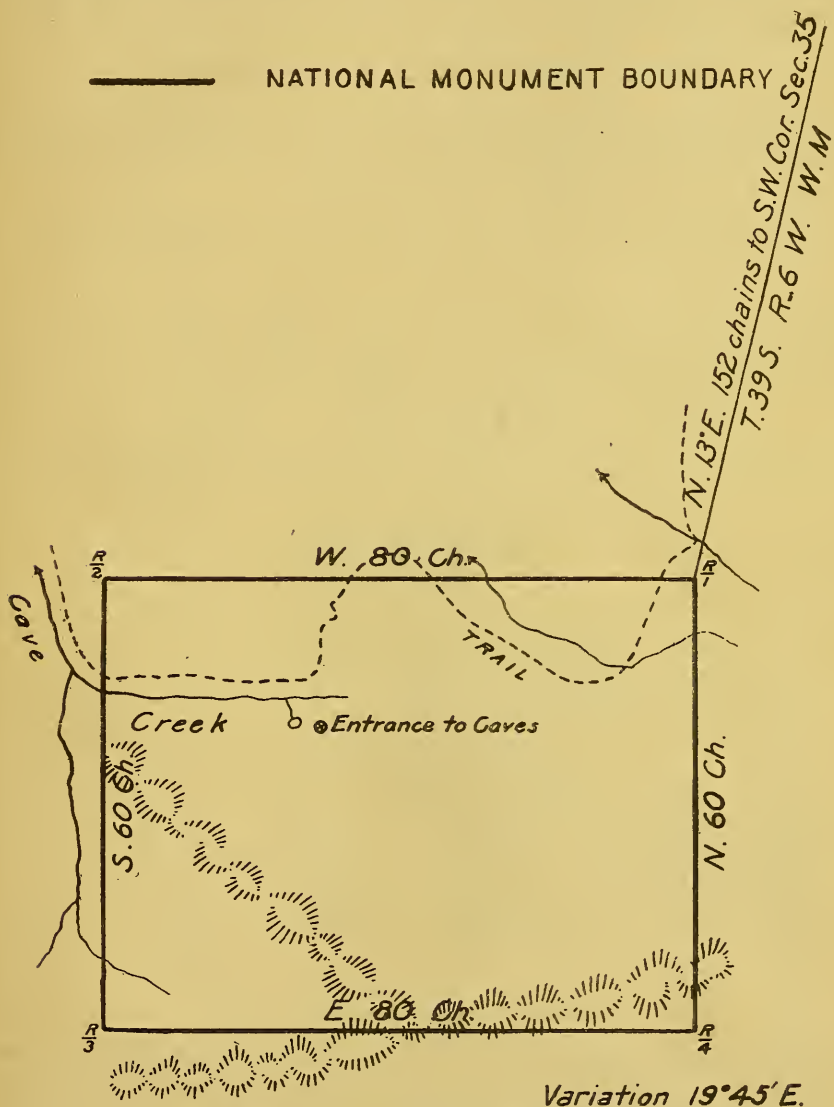


FIG. 29.—Oregon Caves National Monument, within Siskiyou National Forest, Oreg.

The lime deposits take many beautiful forms—massive pillars, delicate stalactites of alabaster whiteness with the crystal drop of water carrying its minute deposit of lime from which they are formed, and broad sheets resembling drapery with graceful curves and waves

that were certainly made by varying currents of wind during formation.

The Forest Service has rebuilt and improved the trails leading to the caves from each side of the divide in order to more easily protect the valuable forest surrounding and to make the caves more accessible to tourists.

DEVIL POSTPILE NATIONAL MONUMENT, CAL.

The Devil Postpile consists of basaltic rocks laid down in the form of an immense pile of posts, and while there are similar formations in

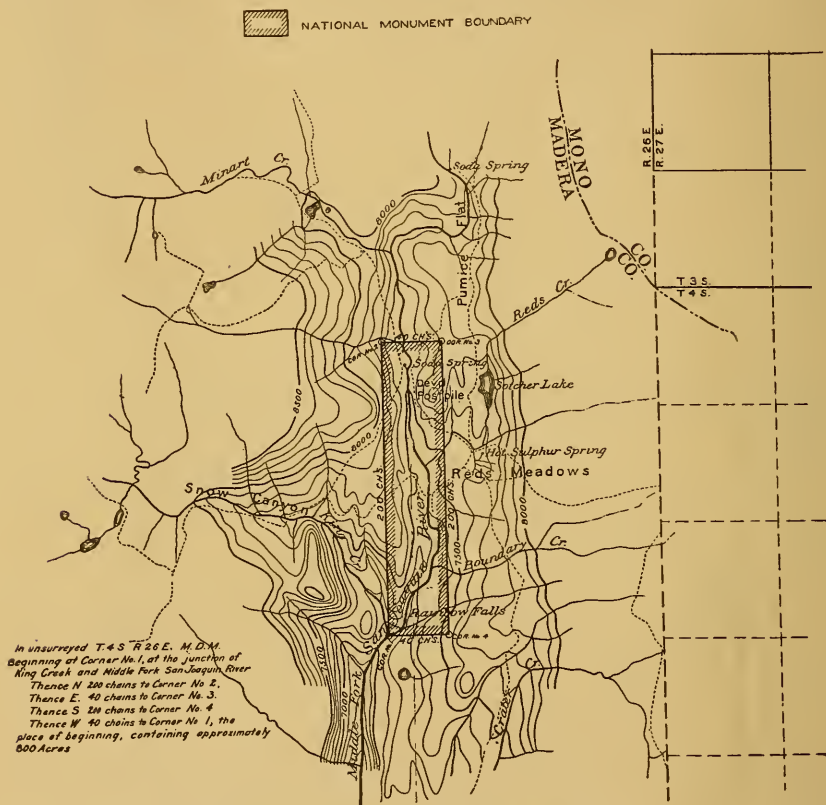


FIG. 30.—Devil Postpile National Monument, Cal.

different parts of the country, this is especially prominent, being one of the most noted of its kind on the continent and said to rank with the famous Giants Causeway on the coast of Antrim, in the north of Ireland.

Below the post pile and above the junction of King Creek and the middle fork of the San Joaquin River is Rainbow Falls, similar to the well-known Vernal Falls of the Yosemite Valley, and one of the few of its kind on the continent.

BIRD RESERVES.

All of the bird reserves have been created through reference from the Interior Department to the President of forms of Executive orders providing therefor. These reserves are regarded as in all essential particulars reservations of public lands for public use or other purposes, for which there are numerous precedents. The first specific act of Congress providing for the protection of birds by bird reserves created by Executive order was introduced by Hon. John F. Lacy, of Iowa, and became a law on June 28, 1906. (34 Stat., 536.) This act made it unlawful to kill birds, to take their eggs, or to willfully disturb birds upon the reservations, and it provides a fine of not exceeding \$500 or imprisonment for not exceeding six months, or both fine and imprisonment, for each conviction secured. This law was substantially reenacted in the new penal code approved March 4, 1909 (35 Stat., 1104), in the following language:

SEC. 84. Whoever shall hunt, capture, willfully disturb, or kill any bird of any kind whatever, or take the eggs of any such bird, on any lands of the United States which have been set apart or reserved as breeding grounds for birds by any law, proclamation, or Executive order, except under such rules and regulations as the Secretary of Agriculture may from time to time prescribe, shall be fined not more than five hundred dollars or imprisoned not more than six months, or both.

The reservations now existing, which are being administered under the direction of the Biological Survey, Department of Agriculture, are 65 in number, as follows:

Bird reserves created.

Name of reservation.	Date.	Location.	Area.
Pelican Island.....	Mar. 14, 1903	East Florida coast.....	5.50 acres.
Breton Island.....	{ Oct. 4, 1904 Nov. 11, 1905	{ Southeast coast of Louisiana.....	Unknown.
Stump Lake.....	Mar. 9, 1905	North Dakota.....	27.39 acres.
Huron Islands.....	Oct. 10, 1905	Lake Superior, Mich.....	Unknown.
Siskiwit Islands.....	do.	do.	Do.
Passage Key.....	do.	Tampa Bay, Fla.....	36.37 acres.
Indian Key.....	Feb. 10, 1906	do.	90 acres.
Tern Islands.....	Aug. 8, 1907	Mouths of Mississippi River, La.....	Unknown.
Shell Keys.....	Aug. 17, 1907	South Louisiana coast.....	Do.
Three Arch Rocks.....	Oct. 14, 1907	West Oregon coast.....	Do.
Flattery Rocks.....	Oct. 23, 1907	West Washington coast.....	Do.
Quillayute Needles.....	do.	do.	Do.
Copalis Rock.....	do.	do.	Do.
East Timbalier Island.....	Dec. 7, 1907	South Louisiana coast.....	Do.
Mosquito Inlet.....	Feb. 24, 1908	East Florida coast.....	Do.
Tortugas Keys.....	Apr. 6, 1908	Florida Keys, Fla.....	Do.
Klamath Lake.....	Aug. 8, 1908	Oregon and California.....	Do.
Key West.....	do.	Florida Keys, Fla.....	Do.
Lake Malheur.....	Aug. 18, 1908	Oregon.....	Do.
Chase Lake.....	Aug. 28, 1908	North Dakota.....	Do.
Pine Island.....	Sept. 15, 1908	West Florida coast.....	Do.
Matlacha Pass.....	Sept. 26, 1908	do.	Do.
Palma Sola.....	do.	do.	Do.
Island Bay.....	Oct. 23, 1908	Florida.....	Do.
Loch Katrine.....	Oct. 26, 1908	Wyoming.....	Do.
Hawaiian Islands.....	Feb. 3, 1909	Hawaii.....	Do.
East Park.....	Feb. 25, 1909	California.....	Do.
Cold Springs.....	do.	Oregon.....	Do.
Shoshone.....	do.	Wyoming.....	Do.
Pathfinder.....	do.	do.	Do.
Bellefourche.....	do.	South Dakota.....	Do.
Strawberry Valley.....	do.	Utah.....	Do.
Salt River.....	do.	Arizona.....	Do.
Deer Flat.....	do.	Idaho.....	Do.
Minidoka.....	do.	do.	Do.
Willow Creek.....	do.	Montana.....	Do.
Carlsbad.....	do.	New Mexico.....	Do.
Rio Grande.....	do.	do.	Do.
Keechelus Lake.....	do.	Washington.....	Do.

Bird reserves created—Continued.

Name of reservation.	Date.	Location.	Area.
Kachess Lake.....	Feb. 25, 1909	Washington.....	Unknown.
Clealum Lake.....	.....do.....	.....do.....	Do.
Bumping Lake.....	.....do.....	.....do.....	Do.
Conconully.....	.....do.....	.....do.....	Do.
Bering Sea.....	Feb. 27, 1909	Alaska.....	Do.
Pribilof.....	.....do.....	.....do.....	Do.
Tuxedni.....	.....do.....	.....do.....	Do.
Farallon.....	.....do.....	California.....	Do.
Culebra.....	.....do.....	Porto Rico.....	Do.
Yukon Delta.....	.....do.....	Alaska.....	Do.
St. Lazaria.....	.....do.....	.....do.....	Do.
Bogoslof.....	Mar. 2, 1909	.....do.....	Do.
Clear Lake.....	Apr. 11, 1911	California.....	Do.
Forrester Island.....	Jan. 11, 1912	Alaska.....	Do.
Hazy Islands.....	.....do.....	.....do.....	Do.
Niobrara.....	.....do.....	Nebraska.....	¹ 14,640 acres.
Green Bay.....	Feb. 21, 1912	Wisconsin.....	1.87 acres.
Chamisso Island.....	Dec. 7, 1912	Alaska.....	Unknown.
Pishkun.....	Dec. 17, 1912	Montana.....	Do.
Desecheo Island.....	Dec. 19, 1912	Porto Rico.....	Do.
Gravel Island.....	Jan. 9, 1913	Wisconsin.....	Do.
Aleutian Islands.....	Mar. 3, 1913	Alaska.....	Do.
Canal Zone.....	Mar. 19, 1913	Panama.....	Do.
Walker Lake.....	Apr. 21, 1913	Arkansas.....	Do.
Petit Bois Island.....	May 6, 1913	Alabama and Mississippi.....	Do.
Anaho Island.....	Sept. 4, 1913	Nevada.....	247.73 acres.

BIRD RESERVES ENLARGED AND REDUCED.

Pelican Island.....	Jan. 26, 1909	Florida (enlarged).....	Unknown.
Mosquito Inlet.....	Apr. 2, 1909	.....do.....	Do.
Cold Springs.....	Nov. 25, 1911	Oregon (enlarged).....	Do.
Clear Lake.....	Jan. 13, 1912	California (reduced).....	Do.
Minidoka.....	Feb. 21, 1912	Idaho (enlarged).....	Do.
Niobrara.....	Nov. 14, 1912	Nebraska (enlarged).....	¹ 15,253.7 acres.

¹ Approximate area.

During the year 9 new reserves for the protection of native birds were created, as follows:

BIRD RESERVES CREATED DURING FISCAL YEAR 1913.

Chamisso Island Reservation, Alaska, created December 7, 1912.
Pishkun Reservation, Mont., created December 17, 1912.
Desecheo Island Reservation, P. R., created December 19, 1912.
Gravel Island Reservation, Wis., created January 9, 1913.
Aleutian Islands Reservation, Alaska, created March 3, 1913.
Canal Zone, Panama, created March 19, 1913.
Walker Lake Reservation, Ark., created April 21, 1913.
Petit Bois Island Reservation, Ala. and Miss., created May 6, 1913.
Anaho Island Reservation, Nev., created September 4, 1913.
Niobrara Reservation, Nebr., enlarged November 14, 1912.

As appears from this list these reservations are scattered between Alaska and Porto Rico, two new ones in Alaska, one of which (the Aleutian Islands) was established not only for the purpose of protecting native birds but also for the encouragement of propagation of fur-bearing animals, reindeer, and food fishes. For the first time a bird reserve was established in the States of Arkansas, Nevada, Alabama, and Mississippi, and after a careful consideration, based upon representations made by this department, the Isthmian Canal Commission secured an Executive order for the protection of the native birds within the zone, which, in its punitive features, conforms to section 84 of the United States Penal Code. Jurisdiction

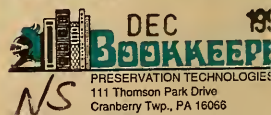
over the Canal Zone Reservation is, however, retained by the Isthmian Canal Commission instead of being placed with the Department of Agriculture, as is the case in all other Government bird reserves.

In addition to these 9 new reserves, the Niobrara Reservation, Nebr., which was created by Executive order dated January 11, 1912, was enlarged by a second order of November 14, 1912, so as to include within its boundaries about 614 acres, covering the old parade ground of the Fort Niobrara Military Reservation, including a spring of fresh running water and some of the military buildings and barracks which could be used for stables and for residence purposes by a custodian. This additional tract has been fenced and small herds of buffalo, elk, and deer, donated by J. W. Gilbert, a citizen of Nebraska, have been permanently domiciled therein, and it is believed that the climate and natural environment will insure the healthful and rapid increase of all of these most valuable of the larger native mammals.

The creation of these 9 additional reservations brings the total number of bird reserves up to 65, and active administrative work by the Agricultural Department upon all of the reserves within its jurisdiction, which have been in serious need of efficient warden service, has been most satisfactory.



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